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PERIODICAL
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Business Leadership: Diverse Origins and Variant Forms
FRITZ REDLICH 177

Operational Capital Allocation Criteria for Development
MICHAEL BELSHAW 191

A Representative Study of Capital Origins
BERNARD M. OLSEN 204

Ideologies of Delayed Industrialization
MARY MATOSSIAN 217

Social Change in Javanese Town-Village Life
ANN RUTH WILLNER 229

City Hierarchies and the Distribution of City Size
MARTIN J. BECKMANN 243

Economy and Space: Review
JOHN FRIEDMANN 249

R. Richard Wohl
THOMAS C. COCHRAN 256

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A journal designed for exploratory discussion of the problems of economic development and cultural change. Preliminary versions of research findings and research hypotheses are welcomed in the interests of provoking constructive and fruitful discussion.

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BUSINESS LEADERSHIP: DIVERSE ORIGINS AND VARIANT FORMS¹

The reasons why business leadership in the various countries emerged in different ways, and at least in the early stages progressed along different roads, can be easily understood. Nations, races, and civilizations have not evolved pari passu, and when, if at all, they reached the stage of high-capitalism, they did so at different moments in the world's history. The variant states of technology and of business technique prevailing at those moments were bound to influence the way business leadership came and the garb it wore. But there is a second, equally important factor making for the divergencies that we find. Each and every society that gave birth to, or adopted modern business leadership was at that moment a stratified society. This statement holds true of and is important for the United States also, as has been brought out in recent research on the social origins of American business leaders in various industries and at various periods. Thirdly, the institutional setup, i. e., the array of existing laws and prevailing thought-patterns as well as social organizations, manifested as great variations among the countries of emergent high-capitalism as that between England of 1790 and Japan of 1870. How then can one expect to find one standardized type of business leadership all over the world or a standardized motivation or a standardized behavior pattern? One can certainly not assume that a Japanese Samurai desiring business leadership in 1870 or an Indian Parsi in 1920 had much in common with a Boulton or a Wedgwood of England's early days, all of whom, however, stood, historically speaking, at about the same point in their country's economic development.

Before we enter into more details, let me point to some important dates, a presentation which should not be misunderstood. No claim is made that business leadership was non-existent before those dates. But modern business leadership--that is, leadership predicated on the existence of machine industry, regardless of whether the businessmen in question worked in the fields of industry, commerce, banking, transportation, or what not--evolved in England in the last quarter of the 18th century, and in the United States and France about 1815. Germany did not reach the corresponding stage before the 1850's, and Italy and Russia hardly before 1890. Japan became between 1870 and 1890 the first Asiatic country possessing an indigenous modern business leadership, while India is pushing into a similar position only now. When the appearance of the business cycle in countries is taken as a criterion of the emergency of high-capitalism and modern business leadership therein, one arrives at somewhat different dates, but they do not very greatly from those just offered.

1. Paper submitted to the Harvard Colloquium on Entrepreneurship in the Middle East, sponsored by the Research Center in Entrepreneurial History and the Center for Middle Eastern Studies (May 9 and 10, 1957).

Now I would present a whole array of entrepreneurial types, and do so on the assumption that the multiplicity of types is indicative of the multiplicity of roads by which business leadership can be attained. We are able, for example, to distinguish national, religious, social, and occupational groups.

When we venture to present "national" types of business leaders, we are aware of touching upon debatable issues. In so doing we imply the existence of national characteristics; and there are social scientists who deny the existence of that phenomenon. Of course, when we speak of national character, we are not thinking of the mystic construct which played a role in the ideas of the Romanticists. The term refers to the common possession by co-nationals of certain outstanding traits or of a specific mixture of such traits. Not much reliable research has been done in this field; but there are at least David Landes' studies of French businessmen. Regardless of criticism of his contribution, he seems to me to have brought out the fact that they represent a specific national type of entrepreneurship, which is quite different from the American, English, or German types. In addition, let me present a few facts which point in the same direction.

One is the attitude of business leaders of various nations toward industrial combination. The English were at first utterly reluctant to enter into combinations, preferring complete independence to larger revenues; and when new ways were unavoidable they turned to mergers. The Germans, by contrast, were eager to restrict competition, and they were steadfast enough to make relatively loose combinations work. Germany became the country of the cartels. The Americans recognized early enough the advantages of a limitation of competition, but were faced with an unfavorable legal tradition. Since they were then not steady enough for gentlemen's agreements, they developed the legal instrument of the trust in order to have a means of restricting competition. And when legal difficulties arose relative to that expedient, they used price leadership as well as mergers and holding companies for the same purpose.

Or take the varying attitudes toward the role of research in business. Its importance was grasped first by the Germans who led in the field prior to World War I; but thereafter American business leaders took to it vigorously; while the English and French businessmen were much slower to see the advantage, let alone the absolute necessity, of research in business.

Important for the formation of national types was the availability, or lack, of models when business leadership was on the point of evolving in a country theretofore more or less backward. While the modern English business leaders were the real pioneers, having no models to follow, and while the Americans, in spite of their dependence on English examples, had to pioneer in many ways because of the virgin conditions on their continent, the modern French and German businessmen were largely modeled on the English pattern. The Russians and the Italians had German prototypes before their eyes; the Japanese had first the Dutch and then the English, later perhaps others also; while the Indians were influenced by the English businessmen working in their midst. And yet there may be a reverse side to this medal. The foreign businessmen who served as models may in some situations have appeared as enemies to be vanquished and perhaps even to be ousted, as seems to have been true in the cases of Russia, Japan, and India. It may have been antagonism to a certain national type of businessman that influence the evolution of a different one.

In contrast let me now draw attention to a phenomenon which can be called the exchange of business leadership, and which may have contributed at a relatively early date, i. e., in the 18th and 19th centuries, to a standardization of business leadership, a countervailing trend toward uniformity. We do not deal here with former colonies, now underdeveloped countries. They were bound to have imported business leaders, a fact which at the time may have made impossible the development of native talent. I do not mean to speak of a country such as the United States, where extensive immigration must have meant that a high percentage of business leadership at times would be of foreign origin. The phenomenon of which I am thinking was that of a genuine exchange. Some of the great English business leaders were of German origin: for example, the Barings, Goschen, Huth, and Meinertzhagen; while, on the other hand, the greatest 18th century bankers in Hamburg and Amsterdam were Britishers: Parish and the Hopes. By 1790 the last named firm was guided by a Frenchman, Pierre César Labouchère, who still later settled in London and took charge of the House of Baring. America reciprocated for the import of business leadership from England by exporting thither Joshua Bates, George Peabody, and Junius Spencer Morgan. There were few business leaders in Western Germany who were as important in industry as the Irishman Mulvany, while the early Upper Silesian metallurgical industry, among others, was started by William Wilkinson and the Scotsman Baildon. The late 18th century London banker and organizer of Lloyds, Angerstein, was a German who migrated to England via St. Petersburg; while the greatest founder of Russian textile industry, Ludwig Knoop, was a German who went to Russia via England. Last but not least, let me point to the importance of Germans in Italian economic development, as for example those connected with the Banca Commerciale Italiana, and to the role of the Greek shipping magnates in England.

Returning to our main line of thought, we are on firm ground when we pass from national to social types of business leaders, for in recent years a good deal of attention has been given to this area. We have come to see that each and every social stratum has contributed to business leadership. Among business leaders have been found princes and noblemen, merchants and craftsmen, workers and peasants; and among the latter were even Russian serfs. The mere enumeration indicates to the historian at first glance that there must have been simultaneously a number of different roads leading to entrepreneurship. It is evident that a noble lord and his serf cannot have carried on business with identical methods or under the spur of identical motives. The Russian serf, for example, could hold property only in the name of his lord, even if he was *de facto* a millionaire. The hope of buying freedom for one's children and oneself was a powerful incentive for unfree business leaders. It was probably as powerful as was that of trying to please the sovereign and of improving one's standing at the Vienna court for Bohemian magnates who were founding industries in a period when Maria Theresa and Joseph II were taking the deepest interest in the economic development of the Hapsburg empire.

As to methods used by various types, we may note that aristocratic enterprisers were the first to separate entrepreneurial functions from managerial, reserving to themselves the function of organizing enterprises and making the strategic decisions, while leaving the day-to-day operations to hired personnel. For a merchant of the same period that would have been all but unthinkable. Again the noble business leader, like the ennobled merchant, who bought landed estates, could make use of feudal rights and privileges in his business and thus gain a competitive advantage. When hard pressed, he could make use of power

rather than of persuasion, the latter being, of course, the only means open to the commoner in business. The rising craftsmen of the early 19th century used methods very different from those applied by sophisticated merchants going into industry; and the degree of secretiveness varied greatly. The serf, for example, kept everything under cover, while the aristocratic enterprisers manifested a willingness to show their plants and advanced methods of production to their peers.

Religious types of business leaders, to which we are now turning, have been in the focus of interest ever since Max Weber wrote his famous essay on "Protestant Ethics and the Spirit of Capitalism" and Sombart his book on the Jews in economic life. More recently the Quakers and Huguenots have been made the objects of investigation. In reviewing such research, however, one needs to distinguish two questions: (1) in what way and to what extent did a particular religious creed contribute to the emergence of business leadership in a particular form? And (2) what influence on the emergence of business leadership must be assigned to the fact that the adherents to certain creeds were by that very fact underprivileged in the countries in which they lived or from which they emigrated. In answering the former question Max Weber pointed to the influence on business of the striving for success, which among certain religious groups appeared as a means to prove one's predestined election to eternal bliss. He also showed the importance for business of an ascetic attitude in those who labored in the world instead of retiring from it. The outcome was the hard-working self-denying type of businessman who by self-restraint on consumption expenditures built up a large capital and used it continuously in further and further ventures and for further capital formation. This type of businessman, with which we are so familiar, was originally formed by Puritanism and conditioned by the Calvinist creed. The Quaker, in turn, is credited with having introduced cooperation among competitors and the one-price system into retailing. In this case religiously-conditioned pacifism was carried over into business and molded business behavior. I do not want to repeat Sombart's comment on the repercussions on business of the Jewish creed, for grave objections to his interpretation have been raised in Jewish quarters. Regardless of doubts that have been voiced, I consider that religious creeds have been shown to have influenced business behavior and thus that they may provide a possibility of furthering or retarding the appearance of modern business leadership. That kind of leadership undoubtedly grew first in Protestant soil. It is surely significant that in Germany Catholics did not rise in business until about 1900.

Turning to the second question, we find that underprivileged status caused by dogged adherence to one's creed usually resulted in concentration on business, since other ways to income and social advance were barred. That such concentration would be highly productive of success is obvious. But "underprivileged" is not necessarily downtrodden. The Huguenots were surely not that. One needs only to remember the Genevese, i. e., Huguenot, bankers in Paris in the late 18th century. Important in their case as in that of the Quakers was the fact that, in the language of the sociologist, they formed an "in-group": outside pressure and external unfriendliness welded its members together. By mutually promoting each other's interests, they gained tremendous strength in business, an area which, in fact, was often neglected by the ruling strata of the societies in question, from whose point of view they were the "outs". On the other hand, the Jews, in the past, were actually downtrodden, and the way in which they had to do business contrasts sharply with the very dignified behavior pattern of 18th and early 19th century merchants. Jewish success in business at that period

and earlier depended to a large extent on the willingness to face and accept human indignities and, besides, to carry on a business which in view of the sanctions prevailing in the Gentile community no merchant would touch who responded to the sanctions of his group.

Not only is a specific kind of business bound to be taken up by, and a different business behavior bound to originate with the underprivileged business leader, but also a unique attitude toward success in business will result. An underprivileged or downtrodden businessman can never be happy, whatever the success in his calling may be. What the Puritan does for religious reasons he will do because of his deep dissatisfaction with the world in which he lives. Business and accumulation of capital without ceasing will be the outgrowth. In contrast, the businessman from the upper layers of society, whose success in business is in addition to his other advantages, will much more readily take things easily and consider this the best of all possible worlds, as was drawn out from J. P. Morgan at the hearings of the Pujo Committee. Single-minded devotion to business will be absent.

In passing, let me point here to a phenomenon, the importance of which for business has not as yet been investigated. I mean the lack at times and places of a universalistic code of business ethics. Actually, two codes of sanctions and ethics may exist side by side, whenever members of in-groups do business with members of out-groups. Particularistic codes will certainly prevail when an in-group is a downtrodden one. What reason do its members have to deal honestly with their tormentors? A double standard of ethics played a role with the Jewish mint contractors of the 18th century and as late as the early 19th in the rise of the Rothschilds. It prevailed until quite recently at the stock exchanges. A man who considered himself scrupulously honest, like J. P. Morgan, actually applied two codes of ethics, one in dealing with his peers and one in his attitude toward the investing public. Only in our day has a universalistic code of business ethics become a matter of course in the Western world. From the point of view of this paper, this discussion brings out again the existence at times of different roads leading to the emergence of business leadership. Sad to say, sinners may arrive as well as saints! On the other hand, the victory, at least in the Western world, of a universalistic code of business ethics points to that countervailing trend toward standardization of business leadership which has been mentioned and which we meet here again.

Not much needs to be said on occupational types: trader, financier, speculator, industrial producer, all of whom are representatives of various approaches to business leadership. There were times when one could reach the very top in one way rather than in another. The speculative element played a larger role in the 18th century than it does today; the industrialist had his day, too, when he came to his own and dominated economic life, in the middle decades of the 19th century; while the financier ruled between 1890 and 1914. The trend toward standardization of business leadership finds expression in the fact that occupational types are losing their importance, because business leadership today means membership in a team on which exponents of all those types work day-by-day hand-in-hand. The 19th century innovator, who plays so large a role in Schumpeter's theory, appears today as the combination on one board of the man of ideas or inventor and the innovation-minded executive and administrator. A mere remark must suffice here to point to the changing character of successful business leaders. Once it was the rugged individualist or the brutal exploiter of labor and, sometimes, of natural resources who succeeded; today, the master

in human relations and the conservationist will come to the fore. In quiet times the conservative and solid type of businessman succeeds; in revolutionary times the upstart, unhampered by traditions or the need to protect a large capital and a privileged position, may go further; and these considerations are again indicative of the possibility of different roads to business leadership.

Our last remarks have brought us to the discussion of historical types of entrepreneurship, historical types in the sense of a sequence. On the basis of goals, attitudes, and behavior patterns, I would suggest that business leaders, in both Europe and America, have manifested certain reasonably distinctive characters of the past 150 or 200 years. I think of them at successive periods as "business-oriented", "industry-oriented", and "job-oriented". In the 18th century, for instance, businessmen tended to be flexible and non-discriminating as to what avenues of activity they pursued. In America, if located in a smaller community, they would not only own a general store, but also build a saw mill and a grist mill, have an assembling trade in country products, and, at a somewhat later period, they would perhaps also take an interest in a local bank and a nearby railroad. Bohemian noble business leaders, such as Count Maximilian Kinsky, produced mirrors, glass beads, and linen which he himself finished. In the first half of the 19th century, we find such "business orientation" represented in America by the Boston Associates who were active in textile industry and merchandizing, banking, real estate operations, sale of water power, railroading, and what not. And Germany had what was derisively called the Kölner Klüngel, at the time the outstanding German business leaders located in Cologne and engaged in banking, insurance, railroading, and industry. But the "business-oriented" type of business leader was replaced by the middle of the 19th century by a new type which was "industry-oriented": one was a textile manufacturer or an investment banker or a wholesale grocer, and only that. After 1880 or so when this kind of business leader became interested in industrial combinations, his acquisitions of plants and enterprises sometimes created an empire pivoting around iron or soap, textiles or oil. In contrast the business leader of today is rather "job-oriented": he is the sales manager or production manager or the financial head of an enterprise; and it is the cooperation of men in various jobs which makes for modern business leadership, with the chief executive mainly the coordinator, pacifier, and organizer. This is a phenomenon pointing to the "countervailing trend": we could rightly say that modern business leadership is on the way to standardization through specialization of the leading men.

This development was paralleled by and dovetailed with others. While the businessman in the 18th and even early in the 19th century was accustomed to relying widely on government action, his 19th century successor would have nothing to do with government; while the enterpriser of the 20th century at least acquiesces in government interference. He may grumble, yet often enough he welcomes it. In fact he can understand government, for the typically 19th century individualist has been replaced by the 20th century business bureaucrat. The attitude toward government has almost swung full circle. So has the attitude toward competition. Widely abhorred by merchants in the 18th century, competition came to be accepted by them in the earlier 19th century; but it came to be considered a rather dubious blessing in the era of industrial combinations when it developed into the cut-throat variety. Today it has become imperfect competition, on the one hand, and inter-industry competition, on the other, and both are accepted in business as perfectly normal. Again, let us look at the attitude toward profit. Of course, there is no successful business without profits, and

there is nothing wrong in the model of the economic man if we understand what it is: an ideal type. In reality, however, the profit motive is only one of several that impel the actions of businessmen; and in the course of historical development and in various countries it has played different and varying roles and has not always stood in first place. Making money has always appeared more urgent to American businessmen than to Europeans, and in America it ranked higher as an impelling force between, say, 1860 and 1930 than it does today.

We must conclude then that different attitudes, motives, and behavior patterns have been equally favorable to business leadership, and that the ones which are helpful today may be detrimental tomorrow. Everything being equal, for example, the merely thrifty man will certainly not overtake his competitors today; 150 years ago it was a different story, because then he was the man who accumulated capital when capital was scarce. I wish to guard against a possible misunderstanding: it is not being claimed here that any one such type ruled at any time to the exclusion of all others or replaced an earlier one outright. I do speak of the changing prevalence of types, which, of course, overlap or may even exist for long periods side by side. Yet there was and is a tendency for some to become more, and for others to become less important as time goes on, unless or until altered conditions begin to impel changes in some new direction.

II

The preceding picture may appear somewhat bewildering, but if so, this is due in part to the requirements of clear analysis. In real life the number of co-existing types shrinks in comparison with the number of those found theoretically, because many of the latter actually coincide. The Puritan and Quaker businessmen of the 18th and early 19th centuries, for instance, were at the same time Anglo-Saxon, middle class, and underprivileged types; and all this taken together led to a certain specific mixture of attitudes, behavior patterns, and goals. The Huguenots were French and had middle- and upper-class origins. Forced by the Edict of Nantes to emigrate to Protestant countries, they aligned themselves with the upper and upper-middle classes, thus appearing among the "privileged" in their new countries and being actually "underprivileged" only when they returned to France. The same is true of the Jewish businessman whom we meet in all periods, who, even when not downtrodden, was always more or less of an "out" and who, at least until the beginning of the 19th century, was hard to fit into the existing class structures.

I trust that the picture can be clarified by describing the emergence of three non-Western cases of business leadership, since such descriptions will bring out the fundamental differences in the approach to identical problems and the variety of ways in which very similar results were attained.² Let us begin with Russia.

2. For the following presentation I have drawn on the advice of Professors Alexander Gerschenkron, Shigeto Tsuru, and of Mrs. Helen Lamb. The final responsibility is mine, of course. For Indian conditions I have also used the paper by Andrew F. Brimmer, "Setting of Entrepreneurship in India", *Quarterly Journal of Economics*, LXIX (1955), and several papers by Mrs. Lamb.

At the present stage of research it seems impossible to ascertain whether or not 18th century Russian merchants or foreign merchants and craftsmen had much influence on the rise of modern Russian business leadership after the liberation of the serfs in 1861. Before that time there had been wealthy and enterprising merchants engaged in trade and some in manufacture, and some aristocratic entrepreneurship in textiles, paper, and beet-sugar production. Except in the last field, however, aristocratic entrepreneurship never really flourished, mainly because of absentee ownership, management by foreigners, and peasant competition. In several lines the products of aristocratic enterprise could not meet the competition of those turned out by peasants working in their cottages. The use of serf-labor in noble-owned factories was a characteristic not found elsewhere in 19th century Europe. Moreover, Russia experienced in pre-Liberation days an unusual kind of business leadership, which, however, seems also to have existed in the preceding century in the Slavic parts of the Hapsburg Empire and even in Prussian Silesia. I refer to the business leadership of serfs, mentioned earlier. That serfs, while serfs, could become millionaires and business leaders appears preposterous to 20th century Americans; but the paradox actually existed.

After Liberation the development took the following turn: aristocratic business leadership all but disappeared. The former serf, already on the road to success in business, was able to rise high, especially as a railroad contractor, as an organizer of shipping ventures (on the Volga, for example), and in the development of whatever industry he had conducted or promoted on a smaller scale before. The same roads were open to and actually taken by merchants, who founded the modern Russian textile industry, backed and financed by that remarkable German with strong English contacts, Ludwig Knoop, who all but controlled the Russian textile industry for decades. The foreign element came to dominate a large sector of heavy industry. In comparison with Western business leaders of the second half of the 19th century, the rising indigenous Russian figures were a type *sui generis*. They were uneducated, utterly greedy, and shamefully dishonest. The illiterate and quasi-illiterate businessmen played a role in England and Germany also, but a minor role only, and they had disappeared as a type in the former country by 1800 and in the latter by 1825. As to dishonesty, Westerners must plead guilty also; but this offence was less common with the dominant European and American merchants, and appeared in the States in the very different form of robber-baron behavior, while not infrequently over the whole Western world in that of a double standard in ethics, differentiating between members of in- and out-groups.

For our purpose the beginnings and the early development of modern Japanese business leadership are of even greater interest. The start was totally different from that in Europe, let alone in America, because the merchant class in Japan, the *chonin*, had a very low social standing and was all but despised. Consequently, the Japanese merchants were not the ones who provided business leadership after the Meiji Restoration in 1868, but the Japanese nobility. In the years prior to the Restoration, two clan chiefs had taken the lead by ordering textile machinery in England, one of them early enough to see it arrive before the almost bloodless revolution. Later, leadership came into the hands of the lower ranks of nobility, i. e., the Samurai. Iwasaki and Fukuzawa may serve as examples. Men of this calibre introduced double-entry bookkeeping and modern commercial documents to Japan and founded (in 1875) the first Japanese business school. Only one family of *chonin*, the Mitsuis, became business leaders in the early decades of Japanese economic development, and they had a

Samurai as an adviser. Nothing is more significant than a slogan of those days according to which business was to be conducted in a Samurai spirit, and not in a business spirit, as an American would expect. In short, one should emphasize that it is not the profit motive but nationalism that explains Japanese aristocratic business leadership.

Until about 1900, i. e., until those who had assumed business leadership in the years after the Meji Restoration had retired from the field, Samurai remained in control of Japanese business. After 1900, however, the country experienced a rise to business leadership on the part of the sons of chonin and by descendants of the peasant class. Again the profit motive does not seem to have played the sole or decisive role. By that time Japanese society, traditionally stratified, was in flux; business leadership by now carried social prestige and had become a means of upward social movement; and though society had become fluid, a berth in the higher strata remained eminently desirable. For adventurous bright youngsters capital was obtainable with relative ease. We can suspect that it had accumulated in the hands of the more successful chonin whose sons now struck out for higher goals, while the Japanese mortgage banks, established early under French influence, provided the owners of land and their sons with the opportunity of mobilizing part of its value for business purposes.

Taken as a whole the Japanese case shows the possibility of the emergence of business leadership under conditions which from the American point of view would be considered distinctly unfavorable. The same can be said also of the Indian development to which we now turn.

The story in India is of particular interest since it is taking place under our very eyes: few leading Indian entrepreneurs of today had fathers, let alone grandfathers, active in modern business. Actually, business in that country manifests various unique features. First, the British started a kind of business enterprise in India not to be found elsewhere, the so-called managing agency. A managing agency runs a greater or lesser number of industrial or commercial enterprises in one or several lines. It finances and it coordinates them, like a European industrial combination, both by stock ownership and by a contract with each enterprise to be managed. Although the managing agency as an administrative instrument can be and is abused (by Indian rather than British businessmen), it is fact an ingenious solution of the difficulty of providing skilled top management and scarce capital within one package in an underdeveloped area. In consequence of this situation the largest sector of Indian business is not really managed by boards of directors, although they exist in corporations, of course, but by the decision-makers in the managing agencies concerned, who control the boards. It is there that one must look for the entrepreneur of theory.

Secondly, Indian business leadership is not so much an individual as a group affair. It is dominated by the so-called "business communities" which have resulted from the fragmentation of the ancient Indian caste system. Today one can characterize them as sub-castes or inter-marriage groups. Outstanding are the Parsis, the Gujaratis (Hindu and Jain), and the Marwaris. Although experience in trading and local finance is available in the "communities" and although the rigidity of their authority in business matters is waning, their influence has not been too advantageous for the country. In the selection of personnel for modern Indian business enterprises, they take care first of members of families belonging to the "community". The result is that indigenous experts

and professionally trained men are held back unless they happen to be "ins"; and this hinders quick economic growth. To be sure, the "communities" as such do not own and operate enterprises, but through custom and by sanctions they exert a strong influence on the business behavior of their members.

The "communities", in turn, are not composed of individuals but of families, which, in fact, are not families of the Western type, but rather extended kinship groups. They live in one compound or at least are held together by common ownership of business assets, some members engaging in commerce, others in various industries, again others in real estate or banking; and they act in and through managing agencies. Traditionally the oldest member of the clan is a kind of senior head of the family business. Such clans stand at the apex of Indian business, the Tatas (Parsis) and the Birlas (Marwaris) being the best known.

The move toward modern business leadership on the part of "communities" and extended kinship groups takes place in what we would consider an unfavorable setting. In contrast to the United States but in resemblance to European experience at the time when its business leadership broke through a feudal setup, business activities are not highly regarded. Whether the Indian traders and money lenders were as despised as the Japanese *chonin* is an open question. Government service carries high prestige, due partly to British influence but more to the still prevailing organic theory of society. (This theory holds that occupational strata perform functions in the body politic comparable to those fulfilled by the organs of the human body, the government standing for the human head and brain. Thus an organic theory of society makes for internal peace, but it stifles useful aggressiveness and certain other traits which have enabled American business leadership to succeed.)

Moreover, the historical moment in which Indian business leadership is emerging is hostile in comparison to that in Western Europe between 1775 and 1850 or that in Italy, Russia, and Japan a few decades later. Communist practices do not go unnoticed by the influential Indian intelligentsia, and the possibility of rational planning, in areas which years ago had to be left of necessity to uncontrolled individual action, cannot be denied. Moreover, Indian public opinion is divided into conflicting views, and emergent Indian business leadership is under crossfire. To some people the latter appears too efficient, destroying the traditional village and village industry which according to the Ghandi tradition should be preserved; for others it does not do enough and does not act fast enough in developing modern industry, being too conservative and innovating too little. Business itself wants government support but as little government ownership and control as possible. Big business has become accustomed to the idea of a large government-owned segment of economic life, confident of its ability to survive, while small business is growing alarmed over government actions which it cannot control. The situation is dangerous enough for business leadership, and we must keep in mind the Chinese case. There business leadership, while just emerging and not so well developed as the Indian today, was eliminated by the Communist victory.

III

What, then, are the conclusions to be drawn by the policy maker from the preceding presentation? First, it may be commented that, wishing to bring

modern business leadership into existence in a now underdeveloped country, he must recognize the possibility of more than one method. Any attempt at merely repeating Western development and any concentration on one presumed panacea may well lead to failure; any attempt to concentrate efforts on traders and money lenders alone would probably be fatal. The policy maker can be sure that there is talent for business in every stratum of the indigenous society, even among the untouchables. Moreover, he should have learned that reliance on the profit motive alone may well prove sterile. The profit motive itself is but a historical category and is always coupled with other motives. Simply holding out the prospect of profit will hardly move an indigenous trader or money lender to become a modern industrialist or banker. But nationalism added to the urge for profit may suffice, as it did in Japan by 1870; and so may the desire to rise high in society, as in the same country by 1900. Indian conditions indicate that a specific family structure may prove favorable to the emergence of business leadership, and by some strange twist certain religious creeds may unexpectedly provide a stimulus, as in Western countries in the case of the Puritans.

Yet such insight would not suffice to avoid all errors, and the historian can offer additional suggestions. The first is that there can be no innovation in old societies, such as the one in the Middle East, without destruction. The policy maker must face up to destruction when he takes the first step. But at the same time he should try to provide that it becomes "creative" destruction--by which I mean that the new institution or manner of thought should be superior to that which is displaced. Each and every page of economic and social history after 1750 teaches those with eyes to see that industrialization is no gathering of violets but that its introduction into "the heart of an old society" produces "tremendous stresses and strains", as Professor Court recently put it.³

Undesired consequences of well-meaning actions are caused often enough by an insufficient awareness of a second lesson which the historian can point out. Overawed by the success of science, Western people and especially Americans are inclined to overlook the fact that what holds true in science does not always hold true in social life. It is a mistake to believe that a given cause will always and necessarily have identical effects, if it is operating in different institutional setups and especially in different civilizations. Always it is man who acts and reacts on the basis of assumptions, beliefs, and other considerations which are fundamentally different in various civilizations.

Scholars have thought this matter important enough to make principles out of it. Thus, Wilhelm Wundt, the philosopher, spoke of the heterogony of goals, and Max Weber, the sociologist, of the paradox of results. The former term expresses the fact that the actual result of a rational action is only very rarely contained in the original goal. Or to put it differently, the result of an action is usually not the one which the actor had in mind. Compared with the goal of the actor the result of the action may be a paradox, as Max Weber put it. The reason can easily be seen. The actor in pursuing his goal meets with resistance; he cuts across the purposes of, or has to compromise with many other actors. To realize parts of his intentions, as he struggles along, he must often and repeatedly change his approach, grasp for new and different intermediate goals,

3. "A New Economic History of England and the Task of the Economic Historian", *Kyklos*, IX (1956), p. 458.

and even abandon the original one altogether in favor of a somewhat different object which appears attainable.

Let me give two examples for the paradox of results which are significant. In the first case we will return to Japan. After the Meji Restoration there was in Japan a commutation of feudal dues. The latter were capitalized and bonds issued to the various members of the nobility. In the future they were to receive money interest instead of the rice which had been coming to them as feudal lords. The two-fold purpose of the action was to solidify in perpetuity the existing social stratification, and at the same time to open the way to more modern undertakings under a money economy. The result of this action was quite different as far as the first goal is concerned. The issue of bonds, together with other fiscal and monetary actions, created an inflation; and the latter forced the weaker and less active members of the nobility to sell their bonds. Accordingly, the bond issues really destroyed the ancient social stratification instead of preserving it. But in the hands of active and powerful members of the nobility the bonds became capital for business pursuits and made possible the rise of Samurai to business leadership, a completely undesired and unexpected, yet highly salutary development.

My second case is taken from Indonesia. By the late 19th century, Christian missionaries won influence over the Batok community on the island of Sumatra. However, the result of their activities was not the generation of Christian saints, but that of native businessmen who came to play a role not only on Sumatra but also on Java whither they migrated. An "aggressive materialism" took hold of the converts and led to a "dynamic search for profits on the part of a minority" and to a "mushrooming of Batok trading and industrial enterprises all along the coast of Sumatra". On the other hand, "the Christian orientation lost increasingly in importance."⁴

Drawing the conclusion from the insight thus gained, I suggest that going ahead singlemindedly with blinkers on one's eyes toward the goal of creating an American-type business leader in a presently underdeveloped country will probably lead to a totally unexpected end. Preparing the soil, planting the seed, nursing it carefully, and waiting for the outcome with a willingness to adopt new goals and procedures, may in the long run lead much further.

Thirdly, in an era of rational planning, the policy maker is apt to forget that the historical process is an irrational affair. Rational planning does not necessarily have a salutary effect, but neither has the application of the trial and error method. Today one is inclined to underestimate the necessity for and the role of slow growth of institutions, once the soil is prepared and the seed planted. To be sure, much longer time spans are here involved than those which economists consider in their so-called "dynamic" models; and time horizons are required which go beyond those which businessmen possess, even businessmen of high calibre. Fortunately, it will be possible to shorten the time formerly needed for such processes by making use systematically of what we have called the countervailing trend toward standardization of business leadership. By importing and educating a coming generation of indigenous businessmen in American and European business schools and institutes of technology, one will

4. Justus M. Van der Kroef, "Entrepreneur and Middle Class in Indonesia", this journal, II (1953-54), p. 301.

be able to familiarize them with both 20th century technology and modern business technique and with business organization; and the process of creating modern business leadership will be further accelerated by sending Western teachers and technicians to underdeveloped countries, as is being done. If a young generation of indigenous businessmen is induced to copy Western methods and forms of organization, the trend toward uniformity and standardization of business leadership will of necessity come into play. It will do so more and faster, the quicker the growing modern non-Western national economies become part and parcel of a non-Communist world economy.

Fourthly, history seems to suggest that insecurity is not fatal to the emergence of business leadership. To be sure, different types of business leadership will evolve under variant conditions of security and insecurity. Also the methods, behavior patterns, profit rates, and even the way in which accumulated profits are used, may well be different. Insecurity, while detrimental and destructive in many respects, implies also chances for unusual profits and for upward social movement, thus providing the two most important incentives for business leadership. If such leadership comes into being in times and areas of insecurity, it will by character be speculative, perhaps dishonest, and be likely to make use of bribery and collusion. It will be business leadership by young men, not burdened by tradition and anxieties. Sometimes in the past, those who prospered needed to be ready to use the sword, as in English, Dutch, and Spanish enterprises of the 16th and 17th centuries. There have always been men willing to fish in troubled waters. Hamburg merchants accumulated capital even during the Thirty Years' War. In the Napoleonic era, there flourished the Frenchmen Gabriel Ouvrard and Pierre César Labouchère, the French-American Stephen Girard, and the Frankfurt Jew, Nathan Rothschild.

Fifthly, the policy maker should not forget that handicapped as underdeveloped countries may appear today, they also have some advantages. The dead hand of past industrial development, embodied in not-yet-amortized over-aged buildings, machines, and equipment and in work habits now obsolete, does not lie heavy on them. They can start at a point to which the West has arrived only after two centuries of development, and can avoid errors now hampering the older industrial nations. Always new nations take the lead, older ones fall behind. Let me point in this context to a phenomenon which I believe to exist, but for which at this moment I have no rational explanation, nor really an array of facts adequate to establish its existence indubitably. I am inclined to call it "cultural fatigue". Professor Court labels this condition "administrative fatigue";⁵ and perhaps Toynbee had it in mind when he wrote about "resting on the oars". France, whose business leadership was flourishing between 1815 and 1870, as only that in England and in Belgium, saw such leadership peter out thereafter. For no observable reason the spirit of adventure and the ability to get big things done declined. We can observe this same phenomenon in present-day England, although, despite its crushing defeat in World War II, no sign of it can be detected in contemporary Germany.

We have tacitly assumed that a large number of the now underdeveloped countries will remain with the Western orbit, willing to adopt Western patterns.

5. I developed the concept of "cultural fatigue" before I came across Court's term in his article on "John H. Clapham", Architects and Craftsmen in History, Festschrift für Abbott Payson Usher, 1956, p. 153.

Yet we would be acting like ostriches if we were not prepared to face the very undesirable possibility of an alternative course of events. It may be that in the majority of these countries no incentive will avail and no modern business leadership will come into being. Historically speaking, this would show that modern business leadership is predicated on the existence of Western institutions, i. e., habits of thought and action, which cannot be duplicated, or can only rarely be duplicated, in non-Western civilizations. In that case government would have to take over the tasks fulfilled in Europe and America by business leadership. What appears as Western business leadership would be paralleled in the East in government economic leadership. In view of the bureaucratization of modern business management, one cannot exclude the possibility that such a system would work, if agriculture, trade, and small industries remained in the hands of private enterprise.

IV

To sum up: in view of the numerous types of business leadership which have existed in the past, the emergence of new ones in the now underdeveloped countries appears entirely possible. The policy maker who wishes to plant the seed of entrepreneurship in new soil must act cautiously. A mere copy and duplication of the present-day American type should not be attempted. Too much pressure in that direction might have unexpected and detrimental results. To be sure, there is a world-wide trend toward the standardization of business leadership because of easy communication and the emergence of an array of efficient business institutions, the adaption of which appears as a "must" for success. The policy maker can consciously make use of this trend. But there is also the possibility of a development away from all business leadership as we have known it. I confess my inability to indicate a forecast except by putting a big question mark on an imaginary blackboard.

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OPERATIONAL CAPITAL ALLOCATION CRITERIA FOR DEVELOPMENT PLANNING*

This paper is an outgrowth of an earlier analysis which, by examining the economic development plans of a number of underdeveloped countries, attempted to determine the capital allocation criteria used by planning authorities.¹ In no case was there any evidence of a consistently used criterion and one gained the impression that, even in the best of the plans, project selection was largely intuitive. Since, in nearly all underdeveloped countries, capital is almost by definition in short supply, it is incumbent upon the economic leaders to extract the last possible ounce of benefit from this resource. Clearly this cannot be done without some accurate guide to project selection.

Why, then, was no criterion apparently used? A number of reasons suggest themselves. First, of course, is the inadequacy of the information available. The point that appropriate statistical series are somewhat less than abundant in underdeveloped countries need not be labored;² no rational criterion will be of any use whatsoever until this gap is filled. But, even bearing this in mind, the planners seemed to make little use of the information they had. Second, it is clear that political considerations played no small role in at least one of the plans. Many projects in India lie under the jurisdiction of the State governments and thus the central agency was, in effect, presented with a fait accompli over which it had little control. Nevertheless, such localism need not adulterate a rational program if a proper criterion is applied to all projects.

A third consideration, which again was clearly in evidence in the Indian plan, results from planners pursuing a number of different objectives at the same time. The Indian planners wished to raise living standards and achieve full employment and remove income inequalities.³ There is no a priori reason why any one criterion should be able to achieve maximum progress towards a given goal when two or more goals are pursued simultaneously. By whittling away at income inequalities, the Indian planners could reduce the incentive to save on the part of

* I am indebted to Professors Charles Issawi, A. R. Burns, and Robert Lekachman for their invaluable advice and encouragement. Responsibility for the opinions expressed rests entirely with the author, however.

1. Michael Belshaw, Capital Allocation Criteria in the Economic Development Plans of Underdeveloped Countries, Ph.D. Dissertation, Columbia University, 1956. The development plans selected were for British Honduras, India, Iraq, and Nicaragua.

2. In the plans for British Honduras and India, this weakness is recognized, and funds are made available for appropriate economic research. See British Honduras, Development Plan, Part III (1955-60), Belize, 1955, and Government of India, The First Five Year Plan, New Delhi, 1952.

3. Ibid., p. 28.

the wealthy, thus inhibiting capital accumulation and hence the other objective—living standards. Galenson and Leibenstein, in a classic article,⁴ demonstrate that the objectives of output maximization and full employment can conflict in the short-run although they are likely to coincide in the long-run. Given their several objectives, the Indian planners, even had they wished to do so, could not have used a rational method for allocating capital. Some subjective choice would have been necessary where conflicts arose, to the compromise of some desired goal.

If only a single objective for development planning is appropriate, what should it be? The discussion of this point need not be extended. The level of living can be maximized only if per capita productivity is maximized. This is not to say that welfare will necessarily be maximized, since it leaves open the questions of how much consumption will be permitted and how income will be distributed and it says nothing of other social and cultural aspects of happiness.⁵ However, the less the per capita output, the less there will be to distribute and consume, and thus per capita productivity is the key to economic well-being. In the discussion below, our objective will be to discover a capital allocation criterion which maximizes per capita productivity or, more simply, total product.

None of the obstacles to the application of investment criteria so far mentioned is insurmountable, and they do not seem to explain why the bases for the various plans were not more scientific. One cannot but suspect that the failure thus far lies with the economists, rather than with the planners. The theoretician has become so concerned with his search for an "ideal" criterion that the application of his notions has been neglected.⁷ Thus this paper will review some of the criteria suggested to date and then amplify one of them slightly into a criterion which retains as much theoretical validity as is possible, but which is at the same time a useful guide to practical action.

Some Alternative Criteria

The literature of economics overflows with many different suggestions concerning the optimum allocation of resources to achieve economic development. Some are general and deal with rather grand issues, such as the relative merits of an agricultural versus an industrial bias, the use of underemployed resources,

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4. Walter Galenson and Harvey Leibenstein, "Investment Criteria, Productivity and Economic Development", Quarterly Journal of Economics, Vol. LXIX, No. 3, August 1955.
 5. About these the economist, qua economist, can say little.
 6. On the operational distinction between these, see below (footnote 22).
 7. No suggestion is intended that some of the more elegant propositions are "useless". Perhaps a time will arrive when we will have both the information and the ability to utilize such refinements as are suggested by Otto Eckstein in "Investment Criteria for Economic Development and the Theory of Intertemporal Welfare Economics", and Francis Bator in "On Capital Productivity, Input Allocation, and Growth", both in the Quarterly Journal of Economics, Vol. LXIII, No. 1, February 1957.

the desirability of "balanced growth" or the doctrine of comparative advantage.⁸ Of more concern to planners, however, should be those criteria which enable judgment to be passed on individual projects, and it is with three of these--marginal productivity, factor intensity, and capital-output ratio--that we shall be concerned.

1. Marginal Productivity

The classic prescription for resource allocation is, of course, that an optimum condition will exist when each factor of production "will be hired up to the point where the value of its marginal product is equal to the factor price."⁹ Chenery¹⁰ appears to be one of the few students of economic development to take marginal theory seriously as a useful device for dynamic capital allocation.

Economic theory tells us that an efficient allocation of investment resources is achieved by equating the social marginal productivity of capital in its various uses. In developed countries, perfect competition provides a standard for judging such a distribution of resources without the necessity of measuring marginal productivity save in exceptional cases.¹¹

However, Chenery continues, in underdeveloped countries, private value and cost may deviate from social value and cost,¹² and his paper is concerned with the practical possibility of measuring and using social marginal product. The problem is not as complicated as it first seems, since:

The formulation of an optimum investment program does not require an accurate measurement of the marginal productivity of each investment. It is sufficient to rank projects in order of their social value, determine the marginal project from the total funds available, and exclude all lower ranking projects.¹³

What, then, is a project's social value? Any project has a product U , the index of social welfare (presumably synonymous with social value) which is the resultant of a number of factors, as follows:

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8. These, and a number of others, are analyzed both theoretically and in terms of their operational utility, in my dissertation referred to above.
 9. Otto Eckstein, *op. cit.*, p. 57. Professor Eckstein, in a few sentences, ably sets out the rationale behind this doctrine.
 10. Hollis B. Chenery, "The Application of Investment Criteria", *Quarterly Journal of Economics*, Vol. LXVII, No. 1, February 1953.
 11. *Ibid.*, p. 76.
 12. We are at a loss to know why this divergence is unique to underdeveloped countries.
 13. *Ibid.*, p. 79.

$$U = \frac{dU \Delta Y}{dY} + \frac{dU \Delta B}{dB} + \frac{dU \Delta D}{dD} + \dots$$

where Y is the effect on national income, B the total net effect on the balance of payments, and D the effect on income distribution.

Assuming for the moment that Y, B, D, etc., adequately cover all the aspects of social welfare and that they are all measurable, the equation presents a reasonable appearance of indicating social marginal productivity. But there is reason to suspect that this is not the case. One of the requirements of marginal economics is implied by the delta in the equation--factors of production must be fungible. Yet this is contradicted by the nature of a development project which can rarely be atomized into smaller, homogeneous units. In other words, the lumpiness of individual investments does not permit the fine adjustments called for by this approach. We could, perhaps, be more sympathetic to Chenery and recognize the possibility that individual projects could be conceived of as units and that investment in any line of activity would continue until the productivities of the marginal units in each line were equated. But setting up these "lines of activity" would, in practice, be quite difficult, since each "line" would have to be homogeneous. In other words, the units of investment should be such that each is reasonably similar. This might not hold true under planning conditions, since a line of activity, such as small-scale industry, is likely to contain such diverse expenditures as for credit facilities, the training of supervisory officers, equipment, market studies, and so on. It might be suggested that each of these categories be separated into independent lines. But each of these lines must contain a sufficient number of discrete units to permit the location of the marginal project and the fragmentation into homogeneous groups will, in many cases, necessitate the isolation of a single project. If we bear in mind the existence of technological indivisibilities, the equalization of marginal products of diverse single units clearly becomes impossible.

When we recall that Chenery talks about ranking projects "in order of their social value", it is easy to see that he is not using marginal analysis at all. It would seem instead that Chenery is presenting us with a rather sophisticated form of the capital-output ratio. Each investment has an output or, in Chenery's terms, a social value which is determined by the resultant effects on national income, the balance of payments, income distribution, and so on. The higher these outputs proportionately to their initiating investments, the higher the "social value" of the project, and Chenery would simply have us work down a list of these desirable projects until the investible funds are exhausted. There need be no consideration of a project's marginal output at all but simply a measurement of its total output in relation to the investment.

More general criticisms of the marginal technique are possible, but only brief mention of them will be made here. One, for instance, relates to the mobility of labor. Frictions due to uneven degrees of training, cultural rejections of some activities, inadequate transportation, and so on, will result in a distinctly non-homogeneous factor whose input value will vary considerably, seriously distorting outputs and hence negating the equalization principle. Then there is, of course, the implicit assumption of this kind of analysis that conditions of diminishing returns exist: an assumption which is only likely to be met operationally in agriculture.

A much more serious objection to marginal analysis lies in the implicit assumption of project independence. Since this assumption is also made in capital-output analysis, it will be discussed more fully below. It is sufficient to say at this point that in practice many projects are inextricably bound together and, accordingly, no investment can be considered as independently as marginal analysis would have us believe.

2. Factor Intensity

One important prescription for capital allocation, around which controversy rages, is concerned with factor intensity. Most students of economic development appear to favor labor intensive projects in underdeveloped countries on the grounds of the relatively abundant supplies of labor in many such areas. For instance, Mandelbaum suggests that:

The maximization principle tells us that in countries where labour is the most plentiful resource, labor intensive techniques and projects up to a point should have preference over others even though actual factor price ratios in underdeveloped countries may make capital intensive schemes appear profitable.¹⁴

Kahn¹⁵ argues in a similar fashion, stating that underdeveloped countries should economize in the use of scarce capital by concentrating on capital light investments. Both, however, present the hypothesis as a first approximation subject to qualification. Kahn recognizes two exceptions to the general rule of labor intensive investment.

- (1) The substitution of labor for capital is seldom costless--transport, housing, and training must be provided, which may necessitate a "substantial complementary investment."
- (2) Industrialization requires bringing into existence "strategic bottleneck" industries. (Apparently Kahn means that some sort of technological imperative necessitates the development of such industries, e.g., railways, hydroelectric facilities, etc. See discussion of interrelationships, below.)¹⁶

Mandelbaum suggests three more limitations.

- (3) Industrial technologies may be quite inflexible, leaving little room for labor-capital adjustments, and thus "one would expect generally a new industry to employ up-to-date methods of production once that industry is included in the programme."

14. Kurt Mandelbaum, *The Industrialization of Backward Areas*, Oxford Institute of Statistics No. 2, 2nd edition, New York, 1955, p. xvii.

15. A. E. Kahn, "Investment Criteria in Development Programs", *Quarterly Journal of Economics*, Vol. LXV, February 1951, p. 38.

16. *Ibid.*, p. 41.

- (4) The use of modern equipment presents an opportunity for training a labor force capable of handling machines. "...it may be better to train a small part of the labor force to the highest techniques, leaving the rest to primitive methods meanwhile, rather than to compel a whole generation to relearn methods several times during its life."
- (5) Labor intensive techniques may result in disguised unemployment. "When total capital is limited, the gain in aggregate income due to higher employment per unit of capital may offset the loss in efficiency, but there comes a point where the use of inferior equipment is tantamount to disguising unemployment."¹⁷

If one accepts these qualifications to the original labor intensive argument, very little appears to be left of it!

On the other hand, Galenson and Leibenstein provide an interesting argument for capital intensive techniques, based upon the employment effects of investment.¹⁸ Using Table I and their "marginal per capita reinvestment quotient",

$$E_{t+1} = E \left(1 + \frac{p-ew}{c} \right)^t, \text{ where}$$

E_{t+1} represents employment in $t+1$ years,

E_1 represents employment in the first year,

p represents output per machine,

e represents the number of workers per machine,

w represents the wage rate, and

c represents the cost of a machine,

Table I.
Investment and Output in Cotton Weaving in India

	Capital investment per worker (rupees)	Value added per worker (rupees)	Annual earnings per worker (rupees)
1. Power machinery, large scale	1200	650	80
2. Power machinery, small scale	300	200	80
3. Automatic loom, cottage industry	90	80	80
4. Hand loom, cottage industry	35	45	80

17. Mandelbaum, *op. cit.*, pp. xvii, 7, 8, 9.

18. Galenson and Leibenstein, *op. cit.*, p. 357.

and assuming that all surplus is extracted for capital formation with no allowance for capital replacement, they deduce the following results.

Table II.

Hypothetical Employment Provided by Initial Investment of
1200 Rupees in Various Types of Cotton Textile Machinery

Year (t+1)	Modern mill, large scale	Power loom, small scale	Automatic loom, cottage industry	Hand loom, cottage industry
5	5	15	13	35
10	34	83	13	35
15	242	444	13	35
20	1,718	2,390	13	35
25	12,200	12,860	13	35

The authors' deduction from this example is that those investments which maximize per capita productivity will, because they permit a larger surplus to be reinvested, maximize both aggregate output and employment in the long run. They conclude from this that underdeveloped countries can maximize progress only if they use capital intensive techniques.

Without for the moment passing on the merits of the example itself, we can make an important point regarding the factor intensity dispute. The literature on the subject is, to say the least, contradictory, and if planners were to give a prescription based on either labor or capital intensive techniques it would, in all likelihood, be misleading. But it is not necessary to resolve this issue here for, as we shall see below, a modified capital-output approach should be able to answer the questions of the planners and, at the same time, lead to the closest approximation of an optimum allocation of resources which can reasonably be expected operationally.

3. The Capital-Output Ratio

Currently, two definitions of the capital-output ratio are used, and since the distinction between them is seldom made, some confusion results. As a gross concept, sometimes referred to as capital turnover, the capital-output ratio can be defined as the ratio between the capital input of a project and its discounted gross annual return. The higher the gross return, the lower the ratio and the more rapidly can an investment be amortized and reinvested. As a net concept, the term refers to the ratio between a given investment and its discounted net annual return--that is, the total return, less all fixed and variable costs.

It is fairly easy to demonstrate that the gross and net capital-output ratios can result in different resource allocations. Let us consider two projects, each involving an investment of \$1,000 and each with a gross capital-output ratio of 5/1, but where the actual life of one investment is twice as long as the other, with the result that its net capital-output ratio (not discounted for purposes of simplification) is more favorable. If the two approaches yield different results,

Table III.
Capital-Output Ratios of Alternative Projects

<u>Project</u>	A	B
Investment	\$1,000	\$1,000
Life of investment	10 years	20 years
Annual Depreciation	\$100	\$50
Gross Annual Output	\$200	\$200
Net Annual Output	\$100	\$150
Gross Capital-Output Ratio	5/1	5/1
Net Capital-Output Ratio	10/1	6.6/1

which is operationally preferable? The answer is clear when we consider how much each project will add to the national income in a given time.

In ten years, Project A will have added only \$1,000, while Project B will have added \$1,500. Using the capital turnover approach, the choice between A and B would be a matter of indifference. Using the net approach, Project B would be preferable since it fulfills more fully the objective of development planning--maximizing a country's output.

If we examine the "marginal per capita reinvestment quotient" developed by Galenson and Leibenstein, we see that it is merely an embellishment of the capital-output ratio. As noted by Moes,¹⁹ $\frac{p-ew}{c}$ is nothing but output, less cost divided by the initial investment, and all this is, in our terms, the gross capital-output ratio. If we apply a net capital-output ratio to the data in Table I²⁰ an interesting result appears. Those investments which tend to maximize employment in the long-run (Table II) are also those for which the capital-output ratio is most favorable (Table IV). This can be grasped intuitively if we observe that a favorable net capital-output ratio permits the accumulation of a surplus which, when reinvested, will create new employment. Planners who, in their haste to alleviate the distress of unemployment, ignore this simple relationship, are doing their country a disservice. Galenson and Leibenstein try to incorporate the population factor into their investment criterion, but this is unnecessary.

19. John Moes, "Investment Criteria, Productivity and Economic Development: Comment", Quarterly Journal of Economics, Vol. LXXI, No. 1, February 1957.
20. Galenson and Leibenstein do not give us depreciation data for this case, and the assumption of equal life has to be made. Thus, in this case, the gross and net prescriptions would coincide. As the authors state, when depreciation calculations are made, they should be based on technological rather than accounting data. An arbitrary accounting for machine life would make the distinction between net and gross concepts useless.
21. Galenson and Leibenstein go too far in their respect for Malthusian conditions. If, as they suggest, capital should be allocated to those areas where it will have the least expansionary effect on population, it may be diverted from areas where it maximizes total output. This is apart from

Table IV.
Calculations of Net Capital-Output Ratios for Different Technologies
Using the Same Total Investment²²

	<u>Modern mill; large scale</u>	<u>Power loom, small scale</u>	<u>Automatic loom, cottage industry</u>	<u>Hand loom, cottage industry</u>
Initial Investment (rupees)	1200	1200	1200	1200
Number of workers (year 1)	1	4	13	35
Total wage bill (rupees)	80	320	1040	2800
Depreciation (rupees)	120	120	120	120
Total cost (rupees)	200	440	1160	2920
Total output (rupees)	650	800	1040	1575
Net output (rupees)	450	360	-120	-1345
Net C/O Ratio	2.6/1	3.3/1	-10/1	-.89/1

If the net capital-output ratio is used as a guide to capital allocation and the surplus is reinvested, the economy will maximize not only employment in the long run but also output throughout the entire time period.²³

the fact that the population effects of investment are extremely difficult or impossible to calculate. Devices other than allocation criteria (for instance, propaganda, clinics, and so on) are surely more effective in stemming the human tide. I agree that per capita productivity must be maximized but argue that this is best achieved by maximizing total production and attending to population difficulties in other ways.

22. Galenson and Leibenstein apparently make the assumption that production is carried on under conditions of constant returns to scale. Since outputs will remain the same from year to year, our simple model can ignore the discounting problems inherent when varying returns exist, and we calculate the capital-output ratio on the basis of the output in year one.
23. Galenson and Leibenstein have been criticized for their assumption that all of the output from a project will be reinvested. This criticism is unwarranted since all they are attempting to show is a tendency. No growth could result from the 1200 rupees scattered amongst the cottage

It should be recognized that even the net capital-output ratio is subject to a serious qualification when it is put into operational use. As with marginal analysis, the theory of the capital-output ratio usually assumes that each project is independent and that the evaluation of any project can be passed on its merit alone. It needs little argument to suggest that in our non-Euclidean universe, and particularly in the meager economies of the underdeveloped countries, projects are often inextricably tangled together by technological, economic, and social interrelationships.²⁴ This condition is well illustrated in a quotation made by Franck from a statement by the Afghan Minister of National Economy defending his application for credit from the Export-Import Bank,

The textile mill project depends upon (a) increased cotton cultivation and (b) expanded electric energy and fuel supply and (c) improved and expanded transportation services. A switch of arable land to cotton and sugar makes necessary increased production of grains, fruit and legumes in the Arghandab and Helmand Valleys. Cement and brick production are an economic asset to the irrigation and construction projects. Similarly, new sources of electric energy and coal are essential to the new textile, cement and brick plants. Finally, increased production of fruits, cotton and meat for domestic consumption as well as for export will intensify the ability of the Afghan economy to repay the hoped-for loan. Clearly, the proposed projects are largely complementary to each other, so that the withdrawal of one makes the others suffer.²⁵

In other words, the successful completion of a given project may entail the initiation of a host of subsidiary projects or the provision of basic facilities such as hydroelectric plants, transportation networks, and so on.²⁶

The impression might be gained, at first sight, that the interrelationships which exist between development projects would have the effect of increasing the difficulties inherent in planning, since they severely limit a planner's ability to choose between projects on an independent basis. Actually, the opposite may be true, since interrelationships may have the effect of diminishing the number of independent output calculations that a planner must make.

industries, whereas it is at least possible when mechanization takes place. Unlike Galenson and Leibenstein, however, I would not use the capital-output ratio as an argument against labor intensive projects. The ratio is neutral in this respect--some labor intensive activities may be competitively productive.

24. This recognition of the existence of interrelationships is not unique. See Maurice Dobb, *Soviet Economic Development Since 1917*, London, 1948, pp. 3, 4, 5, 9, and 10, and Eckstein, *op. cit.*, p. 62.
25. P. Franck, "Economic Planners in Afghanistan", this journal, Vol. 1, No. 5, February 1953, p. 324.
26. In my dissertation, referred to above, these interrelationships were found to be the one common thread running through all the development plans studied and appeared to be extremely extensive.

Operational Technique for Development Planning

In view of the existence of interrelationships, how is it possible to arrive at a technique for maximizing production? A procedure, somewhat as follows, might be useful.

1. Initial Project Selection

On the basis of what we might call "Macro-criteria", it should be possible for planners to outline a general policy for a country's development.²⁷ For instance, in a small country it might be realized that industrialization is impossible and that therefore the most productive line of investment would be in projects which earn or conserve foreign exchange. Or perhaps in a large, densely populated country with rudimentary transportation facilities, small-scale industry might be highly productive in rural areas.

Examination of questions of this nature should indicate to planners the most productive areas of the economy. Once these areas have been determined, a list of all possible projects in these sectors should be compiled.

2. Output Calculations

The outputs of such projects should be calculated on the assumption that all necessary input conditions have been met. For instance, it should be assumed that sufficient power is available, roads and other transportation facilities have been provided, the working force is appropriately trained and is of an adequate level of health, is possessed of mental attitudes conducive to satisfactory performance of duties, and so on.²⁸

3. Investigation of Interrelationships

The projects selected on the above basis can be called "initiating projects" for, to the extent that interrelated expenditures are necessary, such projects "initiate" a whole new line of activity. Thus, after the selection of promising projects is made, the conditions fulfilling the assumptions must be met--highways must be built, workers must be trained, and so on.

The expenditure calculations for these dependent interrelated projects should be on a minimum basis. For instance, an appropriate question to ask might be, "What is the minimum expenditure which will house no more than the number of workers needed for the initiating project?" In many cases, due to indivisibilities, these minimum expenditures may be large. For instance, efficient provision of hydroelectric power usually necessitates facilities far in excess of the size called for by a single factory. Often in such cases, however,

27. These "Macro-criteria" might follow such broad principles as comparative advantage, the need for "balanced growth", the use of underemployed resources, and so on.
28. It is not intended to underplay the likely difficulties in measurement. Measurements are likely to be subject to uncertainties, but physical output calculations based on technological coefficients and probable prices based on trends should enable useful calculations to be made.

several initiating projects will need such power or a generalized demand will exist for home use and private projects not specified in the plan. If there is a reasonable prospect that such facilities will be fully employed, then only the cost imputable to the initiating projects should be added to its input. On the other hand, if the initiating project is alone in using the interrelated facility, then it is necessary to impute the entire cost to it, even if the interrelated project is used at less than full capacity.

The principal advantage of this technique is that it enables social costs to be included in programming but at the same time minimizes the difficult task of making social product calculations. For instance, the cost of training technicians may be included, but no separate calculation of their output is necessary since it is an intermediate product imputable to the initiating project.²⁹

The merits of this approach should not be overemphasized. Many social expenditures will have to be made, the products of which cannot be imputed to specific initiating projects. Even here, output calculations can be made in some cases. Expenditures for the improvement of health can quite clearly increase per capita productivity and perhaps the increases which result could be calculated by statistically controlled experimentation. Similarly, general education expenditures can increase productivities and calculations might be made on the basis of the difference between the occupational-income pattern resulting from the current approach to education and that which might be expected to result from the planned educational expenditures. Obviously, these matters require investigation, but it is only possible at this point to suggest the general line that such calculations should take. It is also obvious that the technique of calculation of such outputs must be perfected to a greater degree than exists at present before planning can be fully rationalized. It is likely that some social expenditures, such as those for municipal parks, will never yield to output calculations since the resultant increases in output are likely to be diffused. Except where the expenditure is clearly related to an initiating project (for instance, parks to tourism), the expenditures will, in all likelihood, have to be made on an intuitive basis.³⁰

4. Selection of Interrelated Sets

The investigation of interrelationships should reveal a number of interrelated sets, each initiated by a different project. Thus, an initiating project to increase rice production may necessitate expenditures on irrigation, land

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29. The calculation of the total net output of an interrelated set (i. e., its contribution to national product) would in some cases make use of the value added approach and in others take the total output, less depreciation, of the initiating project as the contribution.
 30. Although output calculations are necessary for rational planning, even in the field of social services, this emphasis should not be interpreted as representing a narrow interest in economic man. There is no question that important non-economic advantages are associated with many expenditures and that some projects show little economic return. Such expenditures are not necessarily to be denied by planners. However, due to the importance of increasing the net national product in underdeveloped countries, it is incumbent upon policy makers to point out the economic effects of such expenditures.

reclamation, housing, agricultural research and extension, anti-malarial measures, transportation facilities, and so on. Again, a cement plant may necessitate expenditures on mineral research, transportation facilities, housing, and the manufacture of packaging. In many cases, such sets will be tied by inter-related expenditures, such as an access road common to both and due consideration should be given to the full utilization of such an asset.

Once the interrelated sets have been determined and the output of each ascertained, the problem of selection must be faced. In principle, it is simply a question of selecting for a plan those sets with the highest ratio of total net output in relation to total interrelated input, until financial resources are exhausted.³¹

Several important qualifications remain. First, certain expenditures are permissive in the sense that they allow total output to increase but do not lend themselves to output calculations. An important example involves expenditures to alter the cultural atmosphere--propaganda, to some extent education, and so on. In such cases, the appropriate level of expenditure can only be determined by experiment. Second, primary and secondary demand on foreign exchange following from the planned expenditures must be reconciled with anticipated foreign exchange earnings and then the accepted sets adjusted to permit this. It is unlikely that the "ideal" selection of sets maximizing domestic production but independent of foreign exchange considerations would coincide with the selection finally made which has been based upon a realistic appraisal of foreign exchange earnings and needs. Finally, some projects may be independent of interrelationships, and may accordingly show a higher return in relation to investment. These are likely to be listed higher on the scale of preference than the interrelated sets. In underdeveloped countries, however, independent projects are likely to be few due to the backlog of social and economic facilities that must be made good.

The procedure outlined above does not have the air of precision common to mathematical formulae, but, because of the recognition of interrelationships, does appear to have operational validity. No planning is easy, and certainly not as easy as a theoretical formula implies, and it is clear that before this technique can be applied, a great deal of empirical investigation must take place. In particular, the problems involved in the measurement of output, especially in the social services, call for thorough study.

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31. This basis for selection is an obvious oversimplification resorted to for purposes of exposition.

A REPRESENTATIVE STUDY OF CAPITAL ORIGINS

From Adam Smith onward economists have sought to use historical material as a substitute for intuition or introspection in the construction of theories. Time and again the economic theorist has called upon the economic historian to provide knowledge from the laboratory of the past. Currently, as a result of efforts to close that glaring gap in theory concerning economic growth, that long-time student of change, the historian, is again exhorted to produce data in a form that can be used by the theorist for inductive generalization and tests of hypotheses.¹

The inherent difficulties with which the historian is faced in attempting to satisfy these requests have been recounted at length by eminent authorities on methodology.² Most often the historian is primarily interested in describing particular events, and when seeking for causal relationships confines that search to proximate causes. This characterization of the historian's interest implies a criticism that is adverse only from the point of view of the theorist, who values most the broad generalization and an intermediate if not the ultimate cause. No matter how worthwhile the discovery of particulars may be, the result can be of little aid to the theorist. The aggregate product can be no more than a collection of fragments of the past that at best may be knit into a lacy patchwork of the events that have occurred. Nor is it appropriate to suggest that the students of history subordinate their own interests to become handmaidens to the theoretical-minded social scientist. Research into the past to develop a basis for theory is best accomplished by an interdisciplinarian, in this instance the economic historian. Perhaps a better term would be the economist-historian, to distinguish him from the person who is basically an historian interested in economic behavior.

It is impossible to know all of the past, but information that is representative of a whole portion of the past can be made available in those areas where sufficient data have been recorded. The method described in this paper is designed to furnish such a representative picture of an event. In brief, the technique employed is the use of the broadest enumeration of the universe to be examined, in this case United States Census data. From the universe a random sample is drawn for close examination. In this instance the material most

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1. See, for examples, Moses Abramovitz, "Economics of Growth", in Bernard F. Haley, ed., A Survey of Contemporary Economics XXX, Homewood, Ill., 1952, II, pp. 176ff.; Charles Wolf, Jr., and S. C. Sufrin, Capital Formation and Foreign Investment in Underdeveloped Areas, Syracuse, 1955, p. 34; and W. Arthur Lewis, The Theory of Economic Growth, Homewood, Ill., 1955, p. 15.
 2. The many aspects of the problem of relating historical studies to economic theory are ably presented in Frederic C. Lane and J. C. Riemersma, eds., Enterprise and Secular Change, Homewood, Ill., 1953, Part V. In particular, the concluding chapter by Lane contains an excellent summarization.

useful for microscopic examination was county and local histories; in another study other materials would undoubtedly provide better information. Having defined the subject for study and examined within possible limits a representative sample of the whole, the economist-historian is then ready to use the information to test hypotheses, or perhaps add to the observations from which a general law may be induced. In this presentation there will be little discussion of the conclusions drawn from the subject matter; instead, the principal focus of attention will be upon the method employed.

The problem which gave rise to the development of this method was an attempt to discover the sources of capital goods and funds used in founding the early manufacturing industries of the State of Indiana. More generally, the technique is potentially applicable to studies of past growth of population, capital resources, technology, or entrepreneurial abilities. Knowledge gained upon such a general basis may then be used as the economist desires.

This study of the origins of capital growth in Indiana manufacturing proceeded from the assumption that a substantial portion of investments in a new region must come from an external source. The methodological question was how to find out what investments there were and from whence they came. Two principal barriers, aside from the inability of an investigator to contact persons with first-hand knowledge, stood in the way of discovering the extent of the participation of foreigners in the business affairs of a Midwestern community.

First, there is the difficulty of securing information about the finances of a business firm. The same problem that caused the Bureau of the Census to drop the item of capital investment for a firm in 1921 applies to this study. That this is not merely a problem of lack of recollection of the distant past but one that would have applied equally well to the examiner of the day is made clear in a statement by Morgan Neville, who conducted a portion of the Congressional investigation into manufacturing in 1831 and 1832. He wrote, "There was a reluctance in answering questions, particularly as to profits and capital borrowed."³

Secondly, a barrier was interposed by the general distrust of "foreignness". Any amount of evidence can be marshalled to support the existence of an anti-foreign sentiment, particularly in the region that was the Western frontier in the early decades of the 1800's. Such sentiment, for example, was reflected in the debates over rechartering the Banks of the United States.⁴ (Few present-day descendants of the early settlers display this disposition, I believe.) It is possible that in the nineteenth century information about foreign investment was often suppressed to avoid the stigma attached to such outlays, and the information was thus lost to the researcher of today. But this is only my general impression. Explicit supporting evidence has not been found.

Beginning with these basic handicaps, the question arises of a procedure for testing the hypothesis that foreign investment affected the industrial growth of Indiana. The logical sources of information would be written records of the

3. U.S. Congress, House of Representatives, Report of Morgan Neville to Hon. Louis McLane on Returns of Study of Manufactures in the State of Ohio, Cincinnati, dated April 20, 1832, Executive Documents, HR, 22nd Cong., 1st Sess., Vol. II (Serial Set No. 223), p. 861.

4. Or for example, see Niles Register, September 13, 1834, p. 21.

conduct of these businesses, old newspapers, second-hand knowledge of descendants, and descriptive accounts of the local historical variety.

To attempt to use the first class of source material, business records, raises another difficulty. One hundred years after the event, the surviving records are not likely to be representative of all of Indiana manufacturing. Only certain companies of unique character are represented in manuscript collections. An example of this phenomenon is the Indiana University collection, which includes vast volumes of material for the Howard Boat Company of New Albany and the Strongwall Mills, Inc., formerly the Cannelton Cotton Mills. These are in addition to manuscript collections of assorted lawyers, politicians, bankers, etc. The collections provide some material, but only for the few cases that have chanced to survive and have also appealed to someone sufficiently to be brought into the light of day. To avoid this bias, United States census data was used to provide the basis for a representative study.

Although the census of 1810 enumerates the population for the Indiana Territory, there is no report on manufacturing in that document. The census of industry in 1820 included the newly admitted State of Indiana, and a microfilm of the Marshals' schedules was available. The data were, however, so incomplete, erratic, and generally unreliable as to disqualify the material for my use. In 1830 no census of manufacturers was taken, and Indiana was not included in the Congressional inquiry of 1831-32. In 1840 the Marshals' schedules of the industrial census were merely tally sheets and so provide only county totals without any identification of individual firms.

For these reasons 1850 was selected as the base year for this study. Not only were the original Marshals' schedules available, but also the year was auspicious. First, the population schedules provided, for the first time, complete listing of all persons by name, birthplace, age, and occupation, thus furnishing valuable supplementary data. Second, this census represents better than any other the turning point from household, handicraft-type manufacturing to the factory system. It is, then, a logical beginning point for tracing the development of modern industry.

In 1850, the census takers enumerated 4,288 manufacturing firms in Indiana. It is manifestly impossible to examine closely the history of more than 4,000 persons, disregarding partnerships, who for the most part were neither sufficiently noteworthy to rate attention by local historians, nor to be remembered in any detail by living persons. The unrepresentative nature of the readily discoverable facts, together with the large total universe suggested sampling as the best method of solving the problem. Lacking a reliably recorded variable necessarily and intimately connected with the source of capital for investment, none of the formulae for predetermining the reliability of a given sample size were applicable. Therefore, a very rough estimate of the maximum size of sample that would be practicable within a reasonable amount of time suggested examining four hundred firms. This is an extremely large sample, but desirably so in view of the large number of products manufactured and the wide range of firm size.

The randomness of the sample was secured by assigning numbers 1 through 4,288 to the individual firms and then using Tippet's Table of Random Numbers to select the specific firms. For the four hundred firms, there were 482 proprietors. The bulk of the firms were single proprietorships, and none,

so far as could be ascertained, were corporations. No purpose would be served by stratifying the sample, because the manufacturing population was relatively homogeneous by region, there being no significant clustering of particular industries at that early date.⁵

The data extracted from the schedule of manufacturers were:

Name of firm
Kind of business
Amount of capital invested
Amount of raw material used
Type of raw material used
Value of raw material used
Type of power used
Number of male hands employed
Wages paid male hands employed
Number of female hands employed
Wages paid female hands employed
Amount of annual product
Kind of annual product
Value of annual product
Location by township and county

Then the population schedules were studied to supplement that information for each of the proprietors. This resulted in the addition of the following items:

Full name
Occupation
Age
Amount of property owned
Place of birth

In addition, the ages and birthplace of all the members of the family were given. From this it was possible to trace the course of migration of the proprietor: i. e., he may have been born in Connecticut, have married a woman from Pennsylvania, have had a child aged 10 born in Ohio, and three children aged 5, 3, and 9/12 born in Indiana. From these data it may be presumed that he journeyed to Pennsylvania and settled down for some years to 1840 or 1842, then removed to Ohio where he remained until 1842 or 1845, when he again moved westward to settle in Indiana.

Local historical material was searched for reference to the proprietors and evaluated for accuracy with respect to the known census data. By this verification it was possible to avoid accumulating data for persons with similar names and to reject some material; although little that was applicable was found to differ significantly from the known data. Most of the information found was contained in county and town histories. A little was discovered in regional and state histories. Of course, when using these sources, a great deal of chaff must be handled to winnow the relevant material. Contrary to expectation, newspapers were of virtually no value for this purpose. Prior to 1850, journalists of the Central States region generally did not find it newsworthy to report

5. See Gazeteer of the Manufactures and Manufacturing Towns of the United States, New York, 1866.

new arrivals on the local scene nor to mention where newcomers had come from. Some manuscript materials and centennial newspaper issues of the twentieth century were slightly helpful. By and large, for this purpose the much maligned (generally with good reason) commercial county history had the most relevant information.

Because this method of inquiry produced a smaller return than was hoped for, an attempt was made to contact living descendants of the sample population. Since it was not possible to spend several days in each of the scores of towns represented in the sample, questionnaires were sent to each of the persons listed as county history representatives by the State Historical Society. The returns from this inquiry were both disappointing and gratifying. Gratifying because of a high rate of response considering the type of questions asked and the lack of incentive for cooperation; disappointing because so little was discovered. Replies were received for 57% of the letters sent out, but only 8% offered any additional information that was relevant to the study. Many of the correspondents gave every indication of thorough and conscientious attempts to unearth the desired information. In many cases they went to far greater lengths than requested. In four instances at least, extensive appeals were made by feature articles in local newspapers, but with virtually no result.

In order to become acquainted with the problems involved in personal search of a county, I undertook the examination of one county for the ten sample representatives of the county. Here too, usable information was turned up only for the individuals who had been amply reported in the county histories, and the results of the search merely served to corroborate known data.

Next the sample was refined by applying the criteria for classifying a manufacturing firm used in the Eleventh Census and onward. The census of manufacturers in 1850 included those that came to be designated as hand, neighborhood, and custom trades businesses. Because these tend to be small, hand-operated, localized businesses, a more desirable definition of a manufacturing firm was constructed based upon the definitions established in the census of 1919⁶ and that used by Solomon Fabricant in his study of manufacturing industries.⁷

One modification of this basis seemed desirable. In several cases, the exclusion of certain firms on the basis of type of output was excepted when that firm was judged to be a contributor to one of Indiana's leading industries in the early period, or a forerunner of such an industry of a later time. For example, while a custom saw mill producing for the local market was excluded, a large merchant saw mill was included because the lumber industry ranked second in order of product value in the manufacturing industries of Indiana down to 1870 and third to 1890, not dropping below the first ten industries until 1910.

Manufacturing firms were defined on this basis to be those transforming raw materials to finished and semi-finished goods either for sale to the consumer

6. U.S. Bureau of the Census, Abstract of the Census of Manufactures: 1919, Washington, 1923, pp. 7ff.

7. Solomon Fabricant, The Output of Manufacturing Industries, 1899-1937, New York, 1940, pp. 333ff.

or for sale to a processor who would then incorporate those products into a finished product ready for consumption.

Further, while manufacturing in Indiana in 1850 cannot be readily described as "factory" type, it was not possible to distinguish precisely between a factory and a central workshop or mill.⁸ However, a line of division was established to exclude the following if this had not already been accomplished by the census taker:

1. All establishments idle during that year or reporting an annual production of less than \$500.
2. Establishments producing for custom order, or those receiving the larger part of revenue from repair work.
3. Establishments engaged in neighborhood industries and hand trades such as general blacksmithing, harness making, and tin smithing, in which little, if any, power machinery was used and which do only a local business.
4. Establishments engaged in the building trades other than those producing materials for use in that trade.⁹

Applying these criteria to the accumulated data for the gross sample of firms resulted in the exclusion of 205 firms and 231 proprietors, or approximately one-half of the sample. This division was based on the principle that the small cobbler's shop was unlikely to contribute much, if anything, to the growth of manufacturing in the state.

The kind of information discovered for individual proprietors of the firms permitted assignment of origin of capital for only 33 percent of the persons studied. Typically, the local history contained a biography of the local manufacturers. The biography would in many cases contain a detailed account of the person's birthplace, migrations, apprenticeship, and the circumstances of his founding the firm. If the details of the biography were consistent with the census data, and if the description of the founding of the firm clearly indicated the source of his plant, equipment, and funds, assignment was made for that proprietor's capital.

Tables were then drawn up giving the classified aggregates of the sample for comparison with the general population and industrial census figures. Only figures for numbers of proprietors, capital, raw materials employed, and annual production were used. The reason for this selection was to use those quantities that would reflect the most reliable, relative measure of importance for the future of manufacturing development.

Of the data given, capital investment was the most relevant, but has been judged by the census officials to be too unreliable for useful application. Directors of the Censuses decried its inclusion until finally in 1921 the question

8. Fabricant, *op. cit.*, p. 333.

9. U.S. Bureau of the Census, *op. cit.*, p. 7. The definition here stated is paraphrased from the census statement.

was permanently dropped from the census questionnaires.¹⁰ Figures for employment and wages were similarly unreliable because some given are for the total employed by the week, and some by the month or year; some returns were for the average number employed for the week, month, or year; and it was impossible to be sure of the base for the quantities given. No adjustment for seasonal variations was made by the reporting firms, and some of the employers simply refused to respond to the question. Wage and employment information appeared to be even more unreliable than the capital quantities, and less relevant than the other measures, so the labor information was dropped out of the study entirely. The most accurate records kept by the sample firms would be expenditures on raw materials and revenue received from sales. The totals of value of raw materials used and of the value of annual output are placed in conjunction with the distribution of capital totals by origin throughout the study. The percentage distribution of capital can then be compared with the same distribution of inputs and outputs to provide a basis for judging the reliability of the capital data.

In the cases of partnerships and of multiple enterprise firms some division of the combined capital, input, and output was necessary to complete classification on the basis of industry and source of capital investment. For those firms engaging in more than one line of production, such as woolen mills that also ground flour and sawed lumber, the three measures were almost universally subdivided in the census report. For the three or four firms reporting only aggregative totals, an estimated division of respective shares was made by comparison with firms having similar output. In the division of partnership shares, it was necessary to make more arbitrary divisions. Of those members of the sample population for whom sufficient data were lacking to discern clearly the investing or the principal partner, equal shares were assigned to each on the assumption that the resultant errors would cancel out rather than accumulate.

In order to evaluate the role of investment originating from the several sources--Europe, the other states of the Union, and Indiana, the sample data were arranged into five groups. In the first grouping proprietors were classified by nativity. Proportions of total capital invested, raw materials used, and value of annual product were distributed among these several sources by each proprietor's share of the total.

Comparison of the frequency distribution of the sample with the general population suggested at first glance that manufacturing entrepreneurs were significantly more foreign than the whole population of the state. However, further examination reveals the impropriety of drawing such a conclusion. In the first place, the manufacturers belong to the age group from at least 19 years and older. In a newly settled region the bulk of the native-born population will be young children. Population figures of age distribution cross-classified with place of birth for the individual state were not given in the 1850 census. Lacking that information, an estimate was made for those figures using a study of the population of the northern half of the state in 1850.¹¹ The result of this

10. U.S. Bureau of the Census, Biennial Census of Manufactures: 1921, Washington, 1921, p. 8.

11. Elfreda Lang, Immigration to Northern Indiana, 1800-1850, Ph.D. dissertation, Department of History, University of Indiana, 1950.

estimate was compared with the nativity of the sample population. From this comparison it was evident that the significant variation disappeared, and it is necessary to conclude that manufacturers' nativity is similar to that of the whole population of Northern Indiana.

The more important result of close examination is a complete rejection of nativity as a relevant criterion for assignment of origin of capital. Scrutiny of the case histories of the individuals who make up these aggregates reveals a recurrent pattern that may be illustrated by the history of the Gaff brothers, Thomas and James.

The Gaffs operated a combined mill and distillery in Aurora from 1843 to 1881 when the enterprise was incorporated. That establishment produced flour and whiskey at an annual rate of \$407,160 in 1850 (the total annual product of all manufactures in Indiana in that year was \$18,725,423), and in comparison dwarfs any of the other manufacturing enterprises in the sample. This firm demonstrates very well a curious phenomenon that recurred frequently, and that provides a means for illustrating the validity of the use of a proprietor's birthplace as an indicated of the source of capital investment. Thomas Gaff was born in Scotland, James was born soon after the family settled in New Jersey. In 1840 the two brothers began moving to Indiana the large distillery they had operated in Philadelphia. This is clearly a case of direct foreign investment, but from Pennsylvania, not New Jersey or Scotland. This sequence of events was discovered over and over again. Outside of the younger men migrating from Ohio and Pennsylvania into nearby Indiana, the place of birth of the entrepreneur is a misleading standard for tracing capital movements.

Next the data were rearranged to distribute the prime characteristics--number of proprietors, capital invested, raw material used, and annual product--by source of original capital invested in the firm. The resulting distributions are graphically displayed in Figure 1 below. The columns labelled "Numbers of Proprietors" indicate the distribution of the numbers of proprietors classified by the place from which they brought their capital as percentages of the total number of owners. Approximately three-fourths of the proprietors investing capital of known origin in Indiana manufactures used funds accumulated in Indiana, approximately one-fourth brought capital in from the outside.

Division of the amounts of capital invested, as reported in the census schedules, into percentages of total capital derived from the three classes of origin is represented in the columns entitled "Capital" in Figure 1. Comparing the two sets of columns entitled "Numbers of Proprietors" and "Capital", it is evident that more is known about the origin of the quantity of capital acknowledged to the census takers than about the origin of capital each proprietor invested. The source of more than 40 percent of the total capital was discovered, but such knowledge could be found for only a little more than 34 percent of the proprietors. The proportion of capital known to have been imported is greater than the proportion of proprietors known to have brought capital into the state. That conclusion is subject to a bias because of the extraordinary size of the Gaffs' firm, which accounted for approximately one-half of the total capital imported. The Gaff investment aside, the proportion of domestic capital of the total known is slightly more than 60 percent and foreign not quite 40 percent.

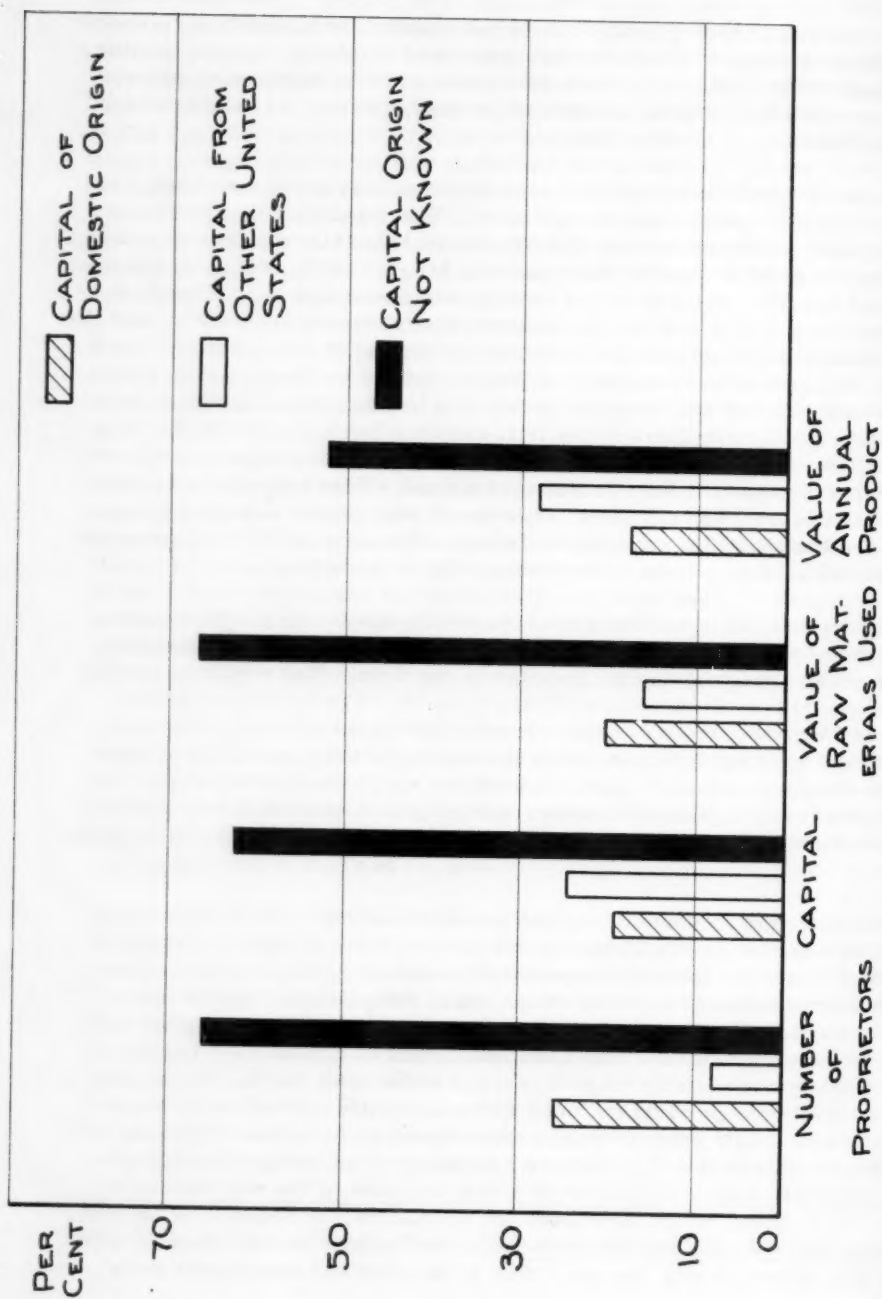


FIG. 1 - INDUSTRIAL STATISTICS FOR SAMPLE FIRMS BY ORIGIN OF FIRMS' CAPITAL, AS PERCENTAGE OF TOTAL.

Thus, it appears that investors using capital originating in Indiana invested somewhat smaller amounts on an average than did the person introducing his capital from the outside. Including all or any part of the Gaffs' investment merely accentuates the point.

If it was safe to assume that the census statistics for capital investment in firms were reliable, the preceding analysis could be accepted as the findings of the sample survey. Because of the unreliability of this item, further analysis based upon value of raw materials used and value of annual product is desirable. These findings serve as a basis for checking the proportional weight of the various sources of capital, and in addition, provide a measure of relative importance of the businesses founded with capital from each source.

The third and fourth sets of columns in Figure 1, labelled "Value of Raw Material Used" and "Value of Annual Product" respectively, represent those data classified in the same way as those for proprietors and capital investment. This graphic comparison provides a means of evaluating the reliability of the capital figures.

A parallel graphical presentation of the same data excluding the Gaff brothers' firm is given in Figure 2.

The difference between Figure 1 and Figure 2 demonstrates the effect of including the Gaffs' mill and distillery in the sample. Including that firm leads to the conclusion that firms established with foreign capital were more heavily capitalized and produced more than their proportional share as measured by the value of annual product. It is, however, appropriate only to say that one firm was heavily capitalized and produced a disproportionate share of the annual product when measured by the standards of the number of proprietors or the value of raw material used.

Referring again to the census tabulations, capital investment in Indiana manufacturing amounted to \$7,750,402 in 1850. Recognizing the fact that this is an extremely crude estimate of actual capital investment, it is still the best available. Multiplying this total by percentage figures of capital origin derived from sample statistics the resultant amounts in rounded numbers are indicated in the first row of Table 1 below. These amounts may be compared with amounts of annual product derived from sample proportions, classified on the basis of origin of capital invested in firms. Multiplying the total product by the percentage shares of sample total found for firms employing capital from the various sources of capital results in the distribution demonstrated in the second row of figures in Table 1.

Table 1.
Industrial Statistics of Indiana Manufacturing Derived from
Sample Statistics, Apportioned on Basis of Origin of Capital

Category	Capital of Domestic Origin	Capital Ori- ginating in Other United States	Capital of Unknown Origin	Total
Capital Investment	1,243,000	1,814,000	4,693,000	7,750,000
Value of Annual Product	3,303,000	5,382,000	10,040,000	18,725,000

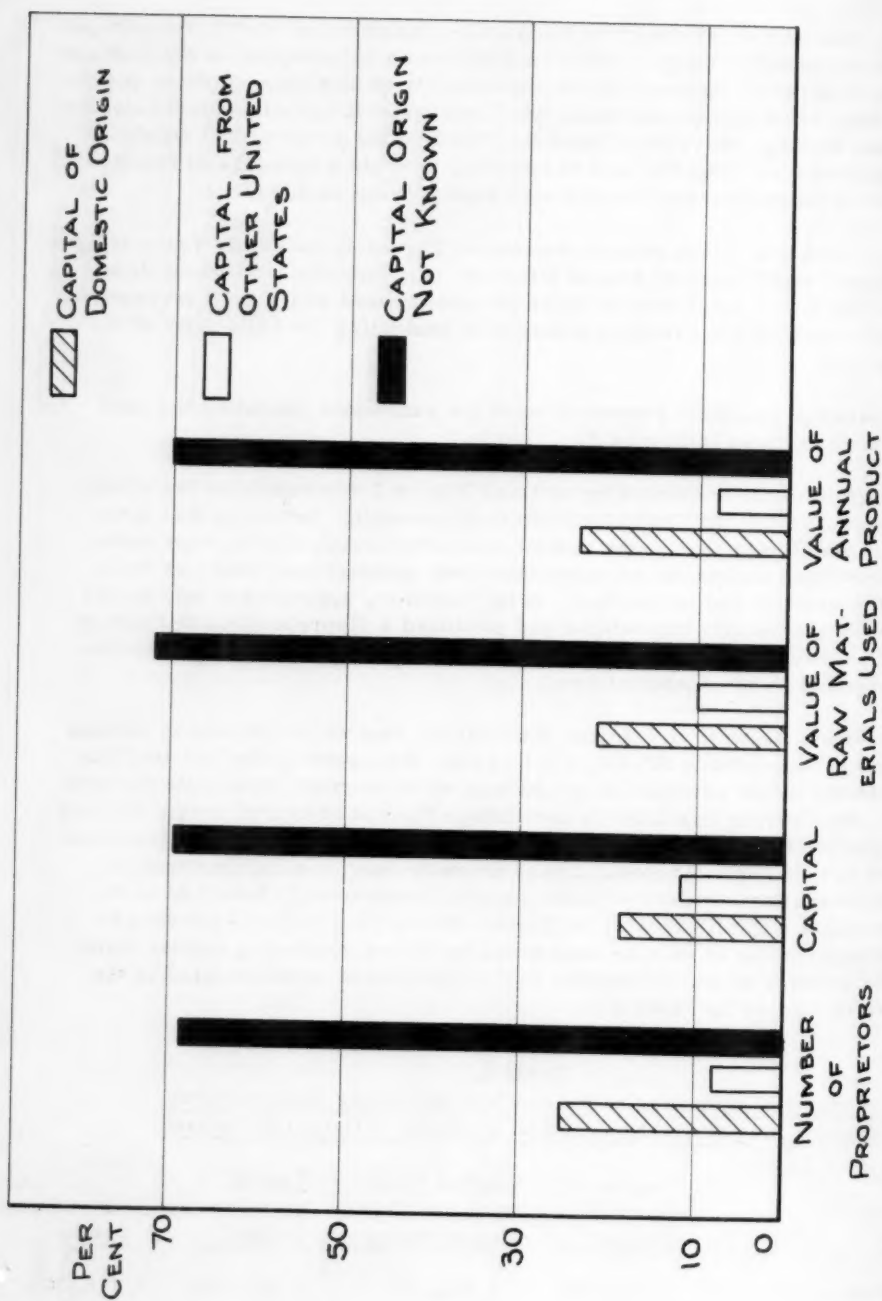


FIG. 2 - INDUSTRIAL STATISTICS FOR SAMPLE FIRMS EXCLUDING THE GAFF BROTHERS, BY ORIGIN OF FIRM'S CAPITAL, AS PERCENTAGE OF TOTAL.

Table 2 is a presentation of the total of industrial statistics for sample firms known to have employed foreign capital traced back to the state of origin. The figures in the second section of Table 2 indicate a lower limit just as the figures in the first section including the Gaffs' firm provide an upper limit to the probable proportions of Pennsylvanian investment in Indiana. Unfortunately, the precise proportion between these limits cannot be determined. Except for this one firm, the State of Ohio emerges as the principal source of capital.

It must be recognized that the distributional shares by states are very sparsely represented in the sample statistics and can at best only suggest possible channels of the course of investment. With the large number of unknown histories of firms positive conclusions are impossible.

Table 2.
Capital Investment and Annual Product of
Foreign Sample Firms by State of Origin of Capital¹²

<u>Category</u>	<u>Ohio</u>	<u>R.I.</u>	<u>Penna.</u>	<u>Md.</u>	<u>Unknown</u>
Capital Investment	34.9	7.4	57.0	0.2	0.6
Value of Annual Product	16.5	1.0	81.5	0.2	0.8

Same percentages excluding the Gaff brothers

Capital Investment	78.3	16.6	3.3	0.4	1.3
Value of Annual Product	83.8	5.2	6.0	0.9	4.0

The question of the influence of capital investment from other states on the rate of growth of Indiana manufacturing can then be answered in the affirmative. A substantial proportion (one-third is suggested by the known data) of the total investment was brought into Indiana by migrants from states along the Northern route of Westward migration. While some was shifted directly from the older states along the North Atlantic coast, more was transferred by removal from Pennsylvania and Ohio.

These findings may now be applied to the hypothesis that foreign capital investment influenced the rate of growth of Indiana manufacturing. At a minimum it can be asserted that the rate of growth of manufacturing in the state must have been accelerated by foreign capital. In a newly exploited region, any increment to productive capacity would have such an effect. When the increment amounts to at least 40 percent of the capital employed in firms, when one-third of the raw materials are used by firms using foreign capital, and when those firms produce at least one-fourth of the annual product, then that increment is significant. Furthermore, if the Gaffs are included, the annual product of foreign capitalized firms outweighs the contribution of firms founded with domestic capital.

The validity of these findings and the generality of application of these conclusions is subject to reservation. It must be acknowledged that the data

12. Amounts are percentages of total quantities in sample known to be of origin other than domestic.

may be biased. While the manner of selection was random, the large number of individuals, 169 out of 251, or 67 percent, for whom no relevant information on capital origins could be found raises some doubt concerning the representative nature of that data. On the other hand, the randomness and large size of the sample justifies the conclusion that information can be gathered for no more than one-third of the population, and that the practical limit of knowledge has been reached. Acceptance of the results then depends upon the willingness to accept knowledge of the past when limited by the ephemeral nature of the essential source materials. Certainly, confidence in generalization is enhanced to the degree that ready availability of data ceases to be the basis for examination. Moreover, the ratio of the known data to the unknown may be quantified to establish the confidence level of empirically derived findings.

One of the valuable products of a study such as this is the recognition of how the task might be better done. An obvious first step in another attempt to apply this technique would be the construction of a frequency distribution by size of annual product of all the firms enumerated in the census. Examination of the distribution would reveal the number of firms of the troublesome size of the Gaffs' in this population. Stratified sampling to yield a 100 percent sample of firms larger than some specified size would probably increase knowledge of the significant variables far beyond the extra effort required. In this instance, the Gaff firm produced 2.2 percent of the total manufacturing output of the state. Inclusion of all firms producing one percent or more of the aggregate output might well have considerably increased the proportion of total capital investment of known origin. The same frequency distribution of the universe would also provide a basis for choice of sampling procedures, and a basis for comparison of the sample population and the universe.

Returning to the demands made by the economist on the historian, the methodology outlined in this paper offers a technique for mutually satisfying the would-be partners. It is unfortunately true that in many regions of exceptional interest there is insufficient recorded data to apply this method. The lack of relevant information in some countries should not preclude the examination of extant records in a form that permits generalization. Application of the suggested technique in several areas at significant points in time would provide the best basis for establishing trends in population movement and growth, capital formation, or technological diffusion. It may even provide some help in discovering the spread of entrepreneurial abilities.

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IDEOLOGIES OF DELAYED INDUSTRIALIZATION: SOME TENSIONS AND AMBIGUITIES

"History and value are worlds apart, but men are drawn to both, with an emotional commitment to the first and an intellectual commitment to the second; they need to ask the two incompatible questions, and they yearn to be able to answer "Mine" and "True".¹

--J. R. Levenson

It is difficult to discern, at first glance, any important common characteristics in ideologies such as Gandhism and Marxism-Leninism, Kemalism, and Shintoism. If they have anything in common, it seems to be a strong infusion of self-contradiction. But on second glance the diverse characteristics and geographic origins of these ideologies fade into the background. In their very self-contradictions one may detect recurrent patterns.

The recurrent patterns can, I think, be accounted for by the similarity of context in which these ideologies have emerged. This context is the industrially backward country which has the following characteristics: (1) it has been in contact with the industrial West for at least fifty years; (2) in it there has emerged a native intelligentsia composed of individuals with at least some Western education; and (3) large-scale industrialization is currently being contemplated or has been in progress for no more than twenty-five years. The ideologies which have emerged in such conditions would include Marxism-Leninism, Shintoism, Italian Fascism, Kemalism, Gandhism, the current Egyptian Philosophy of the Revolution, Sun Yat-sen's Three Principles of the People, the Indonesian Pantjasila, and many others.²

Industrially backward countries have two common problems: the destruction of traditional institutions and values, sometimes even before the impact of industrialism is felt; and the challenge of the modern West.³ The

1. J. R. Levenson, "'History' and 'Value': Tensions of Intellectual Choice in Modern China", *Studies in Chinese Thought*, Arthur Wright, ed., Chicago, 1953, p. 150.
2. Perhaps Nazism should be included, even though it emerged on the German scene about sixty years after industrialization began. In any case, Nazism has many characteristics of ideologies of delayed industrialization.
3. These are the two important situational factors with which Rupert Emerson accounts for Asian nationalism. See "Paradoxes of Asian Nationalism", *Far Eastern Quarterly*, Vol. XIII, No. 2 (February 1954), pp. 131-142.

John K. Fairbank has pointed out that as contact with the West increases, the response increases but is less discernable because Western culture has been incorporated in indigenous culture. He says,

"assaulted" individual must reorient himself in at least three directions: (1) in his relationship to the West, (2) in his relationship to his people's past, and (3) in his relationship to the masses of his own people. It is the "assaulted" intellectual, and his relationship to the uneducated masses, which will be considered here in particular: for although everyone has ideas and wishes, only intellectuals devise ideologies.

Ideology may be defined as a pattern of ideas which simultaneously provides for its adherents: (1) a self-definition, (2) a description of the current situation, its background, and what is likely to follow, and (3) various imperatives which are "deduced" from the foregoing. In ideology there is a strong tendency to merge fact and value, to superimpose upon "things as they are" the things that are desired.⁴ Sjahrir, the Indonesian socialist, said that the weaker the intellect, the greater the element of wish in the formulation of a man's thought. He has held that the element of wish is strongest among "backward" persons.⁵ Perhaps it would be more accurate to say that the intellectual in an industrially backward country cleaves to contradictory propositions because of the situation in which he finds himself. His experience and his present problems tend to direct his reasoning into certain channels. His ego needs protection which science and logic cannot provide. This seems to be true of all men to some extent. If the intellectual is to lead the masses of an industrially backward country in the undertaking of great endeavors, he must provide them with incitement balanced by comfort, with self-criticism balanced by self-justification.

To seek a "morphology" and "natural history" of ideologies of delayed industrialization seems premature, given the present state of Western knowledge. The following analysis is not intended to provide neat answers to big questions, but to indicate some areas where further probing might be productive.

The impact of the modern industrial West is the initial challenge in the industrially backward country. The various ways in which the West has disrupted traditional societies are beyond the scope of this analysis. The point

"'Westernization' gives way to 'modernization', the demand for defense is followed by the demand for reform, and by the time when a reform accelerates into a revolution, the entire society has become involved in a process of change which is too cataclysmic and far-reaching, too autonomous, to be called any longer a mere 'response'." See "China's Response to the West: Problems and Suggestions", *Journal of World History*, Vol. III, No. 2, pp. 404-405.

4. In a moment of unusual insight Gamal Abdul Nasser wrote: "Our souls are the vessels in which everything we are is contained; and everything we are, everything placed in this vessels, must take their shape, even truth. I try as much as humanly possible to prevent my soul from altering the shape of truth very much, but how far can I succeed? That is the question." *Egypt's Liberation: The Philosophy of the Revolution*, Washington, D. C., 1955, p. 29.
5. Soetan Sjahrir, *Out of Exile*, New York, 1949, pp. 89-90.

to note here is that irreversible processes are set in motion. The contemporary scene is littered with fallen idols, desecrated by unsanctioned violence, an uncomfortable place in which to live. Thus, all ideologies of delayed industrialization are essentially revolutionary--in Mannheim's usage, utopian.⁶ They direct activity toward changing a social order which is already changing. Even the superficially conservative ideologies turn out to be pseudo-conservative in the sense that they advocate a change in the status quo. Pseudo-conservative or radical, these ideologies advocate the manipulation of the disagreeable Present. In this sense, *Les extremes se touchent*.⁷

The first problem of the "assaulted" intellectual is to assume a satisfactory posture vis-a-vis the West. The position taken is frequently ambiguous, embracing the polar extremes of xenophobia and xenophilia. The intellectual may resent the West, but since he is already at least partly Westernized, to reject the West completely would be to deny part of himself.

The intellectual is appalled by discrepancies between the standard of living and "culture" of his own country, and those of modern Western nations.⁸ He feels that something must be done, and done fast. He is a man on the defensive, searching for new defensive weapons. As Gamal Abdul Nasser wrote to a friend in 1935:

Allah said, "Oppose them with whatever forces you can muster!" But what are these forces we are supposed to have in readiness for them?⁹

Another characteristic of the "assaulted" intellectual is his uneasy attitude toward himself and his own kind--the intelligentsia and middle classes. Often he scorns his kind (and by implication, himself) as "pseudo", "mongrel", neither truly native nor truly Western. In order to find self-respect, he goes in search of his "true self"; he tries to "discover India"; he revisits the West. For example, Gandhi wrote in 1908:

6. See Karl Mannheim, *Ideology and Utopia*, London, 1936.

7. See Samuel P. Huntington, "Conservatism as an Ideology", *American Political Science Review*, Vol. LI, No. 2, p. 460. Levenson (*loc. cit.*, p. 149), holds that the very existence of traditionalism belies its ultimate doctrine.

8. The usage of the word "culture" depends on the extent to which the ideologist is Westernized. It may mean ideals, values, or simply habits. Sun Yat-sen, a trained physician, deplored such Chinese habits as spitting, letting gas loudly, and never brushing the teeth, as "uncultured". He said that foreigners "can see that we are very much lacking in personal culture. Every word and act of a Chinese shows absence of refinement: one contact with the Chinese people is enough to reveal this." *San Min Chu I*, Shanghai, 1927, pp. 135-138.

9. Nasser, *op. cit.*, p. 27. See also Jawaharlal Nehru, *The Discovery of India*, London, 1946, p. 34.

"You, English, who have come to India are not good specimens of the English nation, nor can we, almost half-Anglicized Indians, be considered as good specimens of the real Indian nation..."¹⁰

Speaking of the lack of good Indonesian literature, Sjahrir wrote in 1934:

In reality, our cultural level is still too low for a real renaissance. There is no thought, no form, no sound, and what is worse, there is not yet enough earnestness and integrity among us. There is still only unsavory counterfeit, which is published with great fuss, but which still has little merit.¹¹

Nehru, while in prison in 1944, recalled:

The present for me, and for many others like me, was an odd mixture of medievalism, appalling poverty and misery and a somewhat superficial modernism of the middle classes. I was not an admirer of my own class or kind, and yet inevitably I looked to it for leadership in the struggle for India's salvation; that middle class felt caged and circumscribed and wanted to grow and develop itself.¹²

Nehru leans toward xenophilia, but his close associate Gandhi took an emphatic xenophobic posture. He asserted that Indians, to be successful in dealing with the British, must "consciously believe that Indian civilization is the best and that the European is a nine days' wonder." Of course, Indian civilization has some defects, he admits, such as child marriage and religious prostitution. But, "the tendency of Indian civilization is to elevate the moral being, that of the Western civilization is to propagate immorality."¹³

The "assaulted" intellectual works hard to make invidious comparisons between his own nation and the West. He may simply claim that his people are superior, as did Gandhi: "We consider our civilization to be far superior to yours."¹⁴ Or he may hold that his ancestors had already rejected Western culture as inferior.¹⁵ But these assertions can elicit conviction only among a few and for a short while. More often the intellectual says, "We are equal to Westerners", or "You are no better than I am." Around this theme lies a wealth of propositions: (1) "In the past you were no better (or worse) than we are now,"¹⁶

10. Mohandas K. Gandhi, *Hind Swaraj*, Ahmedabad, 1946, p. 73.

11. Soetan Sjahrir, *op. cit.*, p. 5.

12. Nehru, *op. cit.*, p. 36.

13. Gandhi, *op. cit.*, pp. 45-46 and 74.

14. *Ibid.*, p. 72.

15. *Ibid.*, p. 46, and Levenson, *loc. cit.*, p. 158.

16. For example, see Sun Yat-sen, *op. cit.*, p. 140. This is a common assertion of Arab ideologists. Of course, there is truth in it, but how does it serve to solve the problem at hand, except to bolster the ego of the "assaulted"?

(2) "We once had your good qualities, but we were corrupted by alien oppressors."¹⁷ (3) "We have high spiritual qualities despite our poverty, but you are soulless materialists."¹⁸ (4) "Everything worthwhile in your tradition is present or incipient in ours."¹⁹ The slogan, "trade, not aid", when used metaphorically, is another variation on this theme. The nationalist claims to seek a blend of the "best" in East and West. But why must both East and West inspire the new culture? Behind this there is perhaps the implicit wish to see the "East" a genuine partner, an equal, of the West.²⁰

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17. Levenson, *loc. cit.*, p. 167, reports that the Chinese used the Manchus as their scapegoat. The Arabs blame the later Ottoman sultans, and the Russians blame the Mongols. There is some truth in these assertions--but it remains to be seen why the native subject peoples failed to get rid of their "alien oppressors".
18. For example, "European superiority to China is not in political philosophy, but altogether in the field of material civilization." Sun Yat-sen, *op. cit.*, p. 98. See Herman Finer, *Mussolini's Italy*, New York, 1935, p. 170 for the Fascist case. See Masaki Kosaka, "Modern Japanese Thought", *Journal of World History*, Vol. III, No. 3, p. 610 for the Japanese case. The Indonesian socialist, Sjahrir, however, rejects notion:
- "Here there has been no spiritual or cultural life, and no intellectual progress for centuries... Most of us search unconsciously for a synthesis that will leave us internally tranquil. We want to have both Western science and Eastern philosophy, the Eastern 'spirit' in the culture. But what is this Eastern spirit? It is, they say, the sense of the higher, of spirituality, of the eternal and religious, as opposed to the materialism of the West. I have heard this countless times, but it has never convinced me." *Op. cit.*, pp. 66-67.
19. See Levenson, *loc. cit.*, pp. 160-161, for a Chinese case; or Mohamed Naguib, *op. cit.*, p. 134: "There is nothing in the Koran that calls for theocratic government; on the contrary, the Prophet was in favor of parliamentary rule."
20. Levenson, *loc. cit.*, p. 174. The "assaulted" intellectual is sometimes comforted by the thought that Westerners have borrowed some element from his own culture. K. M. Panikkar, in *Asia and Western Dominance*, London, 1953, devotes two chapters to the subject of the impact of Asia on the West. However, the element that Westerners borrow may be one which the native intellectual has already rejected as "backward". For example, Americans in Arab countries who adopt the bedouin headdress on occasion are a source of amusement or irritation to the educated city Arab. He looks down on the bedouin, and he does not want the American to identify Arabs with bedouins. Speaking of such British adventurers as Doughty, Lawrence, and Glubb, an Egyptian intellectual remarked, "We're sick to death of Britishers who can recite the Koran." (As quoted by Roland Pucetti, "Three British Bedouins", *Middle East Forum*, Vol. XXXII, No. 4, p. 34.)
- Sjahrir thinks that Westerners who are seeking "Light from Asia" are wasting their time. He says: "I know only too well what the Eastern attributes, so admired by the Westerner, really are. I know that those

The foregoing postures vis-a-vis the West may be comforting to the intellectual, but they will not stimulate action unless certain imperatives are "deduced" from them. For example, "We must purge our national culture of alien corruptions and realize our true character which has been lying dormant within us." But doses of self-criticism are equally important incentives to action, because they make it impossible to relax in complacency. In 1931, Joseph Stalin, leader of one of the most spectacular cultural transformations in human history, told Soviet industrial managers,

One feature of the history of old Russia was the continual beatings she suffered for falling behind, for her backwardness. She was beaten by the Mongol khans. She was beaten by the Turkish beys. She was beaten by the Swedish feudal lords. She was beaten by the Polish and Lithuanian gentry. She was beaten by the Japanese barons. All beat her-- for her backwardness: for military backwardness, for cultural backwardness, for political backwardness, for industrial backwardness, for agricultural backwardness. She was beaten because to do so was profitable and could be done with impunity...

That is why we must no longer lag behind... We are fifty or a hundred years behind the advanced countries. We must make good this distance in ten years. Either we do it, or they crush us.²¹

Another man who administered blunt criticism was Mustafa Kemal Atatürk, who told the Turkish Grand National Assembly in 1920,

We have accepted the principle that we do not, and will not, give up our national independence. Although we always respect this basic condition, when we take into consideration the level of prosperity of the country, the wealth of the nation, and the general mental level, and when we compare it with the progress of the world in general, we must admit that we are not a little, but very backward.²²

Atatürk praised the Turkish nation, however, for high moral qualities and great past achievements. Although he was probably a xenophile by conviction, he succeeded to a remarkable degree in overcoming the xenophobia of his people by means of his ideological rhetoric. When it was suggested that to borrow from the West "all that Turkey needs" might conflict with the national ideal, Atatürk retorted that the national principle itself had become internationally accepted; and also,

attributes are molded and nourished only by the hierarchical relationship of a feudal society--a society in which a small group possess all the material and intellectual wealth, and the vast majority live in squalor, and are made acquiescent by religion and philosophy in place of sufficient food.

"That longing of Westerners for the East, in effect, amounts to the same thing as longing for the lost land of the Middle Ages, and the greater goodness and universality that presumably characterized it." *Op. cit.*, p. 160.

21. J. S. Stalin, *Problems of Leninism*, Moscow, 1947, p. 356.

22. Mustafa Kemal Atatürk, *Atatürk'ün Söylev ve Demeçleri*, I, Istanbul, 1945, p. 29.

Countries are many, but civilization is one and for the progress of a nation it is necessary to participate in this one civilization.²³

Ataturk justified the importation of specific alien inventions, such as terms from non-Turkish languages, with the assertion that the so-called import was actually indigenous: according to the Sun Language Theory, Turkish was the mother of all the languages of the world, so that "borrowed" words were actually prodigal sons come home.²⁴ This technique of encouraging an import by calling it indigenous was complemented by the technique of eradicating the indigenous by calling it imported. For example, Ataturk pointed out that the fez was a head-gear imported from Europe a hundred years before.

When the intellectual in an industrially backward country surveys modern Western civilization, he is confronted with five hundred years of scientific, artistic, social, economic, political, and religious developments. He sees a flood of heterogeneous Western cultural elements, from jazz to steel mills, pouring into his country. Then, fearing that he will be "swamped" by the deluge, and lose his own identity, he tries to control cultural imports. In order to do this, he must find a standard to determine exactly what should be borrowed. The standard used by the nationalist is that the element to be imported should be in "conformity" with his own national culture and should serve to strengthen his nation. This formula is very elastic, and can be used to justify the borrowing or rejection of practically anything. But the Marxist-Leninist holds that the element to be imported should be one that is "progressive" in terms of the Marxist-Leninist pattern of social evolution. According to this pattern, the "bourgeois" West is decaying; it is the "toilers" of both East and West who ride the wave of the future.²⁵ Imperialism is the highest and the last stage of capitalism. However, Western industrialism and science are the great hope for the non-Western peoples; and the Soviet Union is represented as a model of rapid industrialization and scientific development. If the industrially backward nation borrows from the West only what is most "progressive", it can skip a part, or a stage, of the long and difficult social development of the West. Then, as the West decays, the former backward nations will surpass the best that the West has ever achieved.

The tension between archaism and futurism is another ambiguity in ideologies of delayed industrialization. It is closely related to the xenophobia-xenophilia tension, because the West is "the new" and the native culture is "the old" at the onset of contact.

Archaism is an attempt to resurrect a supposed "golden age", or some part of it. This "golden age" is usually not in the disagreeable recent past, but in a more remote period, and it can only be recovered by historical research

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23. Ataturk, *op. cit.*, III, Ankara, 1954, pp. 67-68 and 87.
 24. Uriel Heyd, *Language Reform in Modern Turkey*, Jerusalem, 1954, pp. 33-34.
 25. Marxism-Leninism is of course not the only ideology that contains this proposition. Western ideologists who talk of "the Decline of the West" and "the Awakening of the East" have contributed to, and reinforced, such sentiments.

and interpretation. For example, Mussolini gloried in imperial Rome and the medieval "corporate state"; the Slavophiles glorified the peasant *mir* and the indigenous Christian Orthodox practices in Russia; the Shintoists revived an ancient mythology that deified the Emperor; Sun Yat-sen and Chiang Kai-shek exhorted the Chinese to revive Confucian ethics; Gandhi urged that India return to the age of "Rama Raj"; and Atatürk exulted in the barbaric virtues of the Osmanli nomads. According to Gandhi,

It was not that we did not know how to invent machinery, but our forefathers knew that, if we set our hearts after such things, we would become slaves and lose our moral fibre. They, therefore, after due deliberation, decided that we should only do what we could with our hands and feet. They further reasoned that large cities were a snare and a useless encumbrance and that people would not be happy in them, that there would be gangs of thieves and robbers, prostitution and vice flourishing in them, and that poor men would be robbed by rich men. They were, therefore, satisfied with small villages.²⁶

According to Mussolini,

Rome is our point of departure and of reference; it is our symbol, or if you like, it is our Myth. We dream of a Roman Italy, that is to say wise and strong, disciplined and imperial. Much of that which was the immortal spirit of Rome resurges in Fascism.²⁷

According to Sun Yat-sen,

So, coming to the root of the matter, if we want to restore our race's standing, besides uniting all into a great national body, we must first recover our ancient morality--then, and only then can we plan how to attain again to the national position we once held.²⁸

But Nehru condemns archaism:

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26. *Hind Swaraj*, p. 46. Gandhi's archaism went to incredible lengths. In the same work (pp. 42-43) he indicted Western medicine:

"I have indulged in vice, I contract a disease, a doctor cures me, the odds are that I shall repeat the vice. Had the doctor not intervened, nature would have done its work and I would have acquired mastery over myself, would have been freed from vice and would have been happy."

"Hospitals are institutions for propagating sin. Men take less care of their bodies and immorality increases."

These opinions might be dismissed as unimportant since they were expressed so early in Gandhi's career. However, in a preface to a new edition of *Hind Swaraj* which Gandhi wrote in 1938, he said:

"The booklet is a severe condemnation of 'modern civilization'. It was written in 1908. My conviction is deeper today than ever. I feel that, if India will discard 'modern civilization', she can only gain by doing so." (P. 11).

27. As quoted by Finer, *op. cit.*, p. 191.

28. Sun Yat-sen, *op. cit.*, pp. 125-126.

We have to come to grips with the present, this life, this world, this nature which surrounds us with its infinite variety. Some Hindus talk of going back to the Vedas; some Moslems dream of an Islamic theocracy. Idle fancies, for there is no going back, there is no turning back even if this was thought desirable. There is only one-way traffic in Time.²⁹

Archaism may slip into a futuristic ideology, such as Marxism, and create an ambiguity. Adam Ulam has suggested that Marxism has its greatest appeal for semi-proletarianized or uprooted peasants who are nostalgic for the "good old days" when their actions were governed by nature, the village elders, the family patriarch, and the religious authorities--instead of the less congenial factory boss and the State. To the uprooted peasant Marxism offers a comforting strain of archaism: that is, it envisions a utopia in which state and factory, as coercive institutions, have "withered away".³⁰

Whenever a resurrection of the past is contemplated, the question arises, "What part of the past?" or "Which age was our golden age, and why?" Sometimes the age selected is an imperial age, when the people in question enjoyed their greatest authority over others. Sometimes a period of "pristine simplicity" is admired. But new imperial conquests are incompatible with the weak political and economic position of industrially backward countries, and a return to the "simple life" is incompatible with industrialization. In such cases archaism is not a solution to the problem at hand, but an escape from it.

However, there are more constructive uses of the past. The intellectual may discover that in the remote past his people possessed the very virtues which are supposed to make a modern nation great. For example, the Kemalists glorify their ancestors as brave, tolerant, realistic, generous, peaceful, and respectful of women; in short, "spiritual" exemplars of the well-bred Western European gentleman. These "genuine" Turks were temporarily "corrupted" by Arab-Persian-Byzantine culture, but they are now due to take their rightful place among "civilized" nations.³¹ The manifest content of such an ideological position may be archaistic, but its latent content is futuristic.

The Communists also use the past in this way. But they have characteristic standards for determining what elements of the past are desirable. The Chinese Communists have cultivated peasant literature and art because they are "progressive", being products of a "progressive" class; whereas gentry culture is rejected as "feudal".³² In the Soviet Union the pre-revolutionary leaders most cherished by the Communist regime are those it considers "progressive" for their time (such as Peter the Great), whereas "reactionaries" (such as Dostoyevsky, until recently) have been under a cloud.

29. Nehru, *op. cit.*, p. 447.

30. Adam Ulam, "The Historical Role of Marxism and the Soviet System", *World Politics*, Vol. VIII, No. 1, pp. 20-45.

31. See Halide Edib Adivar, *Turkey Faces West*, New Haven, 1930, pp. 1-9.

32. Levenson, *loc. cit.*, p. 184.

Nationalists, when selecting elements from their past, ask, "What will tend to strengthen the nation?" But tradition has lost its natural charm, and traditionalism is something the nationalist must "work at". He uses the shared traditions of his people as raw material with which to build national morale; but tradition is a means, existing only for the sake of national strength, and not as an axiomatic, self-justified good.³³ For example, Sun Yat-sen said in 1924:

Our position now is extremely perilous; if we do not earnestly promote nationalism and weld together our four hundred millions into a strong nation, we face a tragedy--the loss of our country and the destruction of our race. To ward off this danger, we must espouse Nationalism and employ the national spirit to save the country.³⁴

There are other uses of the past besides escapism, the sanctioning of innovations, the glorification of "progressive" individuals and groups, and national self-strengthening. The past may be used to eradicate what the intellectual feels to be undesirable in the present and for the future. By publicizing the results of historical research, showing that a supposedly indigenous cultural element (like the fez) is of foreign origin, he may thereby stigmatize it. He may use other grounds to stigmatize the Ottoman and Chinese literary languages; they are the languages of reactionary and oppressive ruling classes who have cared only for their own welfare, rather than the welfare of the people.

The concern of both nationalists and Communists for vernacular languages and peasant arts is closely related to a third problem of the "assaulted" intellectual: his relationship with the uneducated masses. Some intellectuals have a sentimental, patronizing, or contemptuous attitude toward the masses.³⁵ Sun Yat-sen said,

The Ming veterans spread the idea of nationalism through the lower classes; but, on account of their childish understanding, the lower classes did not know how to take advantage of the ideas, but were, on the contrary, made tools of by others.³⁶

Mohammed Naguib of Egypt wrote in 1955:

Given the deplorable conditions in Egyptian villages, however, the distinction between compulsion and cooperation is irrelevant. The average fellah has fallen too low to be able to help himself without a great deal of compulsory assistance from the government.³⁷

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33. Levenson, loc. cit., pp. 172-173. See also Emerson, loc. cit., pp. 136-142.
34. Sun Yat-sen, op. cit., p. 12.
35. See the statement of an Arab, al-Kawakebi, in Hazim Z. Nuseibeh's The Ideas of Arab Nationalism, Ithaca, 1956, p. 132. See also D. P. Mukerji, "The Intellectual in India", Confluence, Vol. IV, No. 4, p. 446, and James Mysbergh, "The Indonesian Elite", Far Eastern Survey, Vol. XXVI, No. 3, p. 39.
36. Sun Yat-sen, op. cit., pp. 61-62.
37. Naguib, op. cit., p. 149.

Other intellectuals, like Nehru, wonder if the peasants are the "true" Indians, while they (the intellectuals) are only "pseudos". The Russian Narodniki went "back to the people" to learn from them and to teach them; and so have Turkish intellectuals in our own century. Undeniably, many intellectuals have felt sincere compassion for the sufferings of the peasants and sincere respect for the folk arts. But it is unlikely that the attitude of an intellectual toward the uneducated masses in an industrially backward country (or in any country) is free from ambiguity: he looks up to "the people" and down on "the masses".

However he may feel about the majority of his compatriots, the intellectual must face the practical problems of industrialization and modernization. The intellectual knows that a government which really represents the thinking of the uneducated masses will not attack these problems boldly and comprehensively. The peasant may long for riches, but he is not eager to give up his traditional ways. To attain its ends, the intelligentsia must arouse the masses to strenuous effort, or, as Alexander Gerschenkron puts it, give them an emotional "New Deal".³⁸

The intelligentsia must provide just the right amount of criticism, and just the right amount of comfort necessary to make the masses follow its lead into the "battle" of industrialization. That is why ideologies of delayed industrialization condemn the peasant for his backwardness, and the praise him for being a real representative of the indigenous culture. Such ideologies may stand for class equality and simultaneously exhort the masses to follow orders and to accept unequal rewards, both as individuals and as occupational groups. This does not mean that "assaulted" intellectuals are necessarily cynical and manipulative; they may be sincerely attached to contradictory premises.

In most cases, when an ideology of delayed industrialization emerges, the traditional rulers (king, sultan, tsar, etc.) have been overthrown, or are on the verge of being overthrown. But when traditional rulers remain in power, as in Japan, they are supported by new social groups and assume new social functions. They must now mobilize the masses to meet the challenge of the modern industrial West. Whether there has been a massive social revolution or a "circulation of elites", the cultural revolution is inevitable.

Rupert Emerson has suggested that if reform and revolution in industrially backward countries are led by Westernized intellectuals drawn from various social strata rather than by traditional elites, the prevalent ideology tends to include a stronger egalitarian element. The intelligentsia, having no solid power base of its own, is especially in need of mass support. This is particularly true, he believes, in areas which have been longest under Western domination, such as India, where the traditional native elite lost most of its power and indoctrination in Western political values went deep. But in countries like Japan, where the traditional elite took command of social and economic reform, the prevalent ideology tends to put a premium on hierarchical values: loyalty, obedience, respect.³⁹ This theory may be useful in explaining differences between developments in India and Japan, but its applicability

38. Alexander Gerschenkron, "Economic Backwardness in Historical Perspective", in *The Progress of Underdeveloped Areas*, Bert Hoselitz, ed., Chicago, 1952, pp. 22-25.

39. Emerson, *loc. cit.*, p. 140.

elsewhere is dubious. It is important here to distinguish between symbolic values, which may be egalitarian, and their accompanying operational values, which may be hierarchical. It is also important to define "equality": is it legal, economic, spiritual, or does it refer to the possession of a common culture?

The tension between egalitarian and hierarchical values is sometimes resolved theoretically by the doctrine of "tutelage". According to this doctrine democracy must be introduced into a country in two stages. In the first stage, a single, "all-people's" party of the most "enlightened" and "progressive" elements of the nation takes over the government and acts as a faculty for educating the masses in democratic ways. At some time in the indefinite future the masses will be ready for direct self-government and the "all-people's" party will "wither away". This doctrine, with various modifications, has appeared in Turkey, India, and China; but when the doctrine has been applied, it has led to a variety of unexpected results.

In order to understand an ideology it is important to determine what problems its initiators are trying to solve. In the case of intellectuals in industrially backward countries, the three main problems are: (1) What is to be borrowed from the West? (2) What is to be retained from the nation's past? (3) What characteristics, habits, and products of the masses are to be encouraged? It is remarkable that intellectuals in widely separate parts of the world have reacted similarly to these problems.

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SOCIAL CHANGE IN JAVANESE TOWN-VILLAGE LIFE

An assessment of the impact on Javanese social structure, economic orientation, and cultural values of seven years of occupation and revolution, five years of political independence, and two years of rising inflation is an undertaking for a team of social anthropologists. In the remarks below I merely touch upon the outward manifestations of change in the urban areas, offer a generalized picture of contemporary town and village life, and deal mainly with phenomena of change observed in the course of fieldwork¹ in one town-village complex in East Java.

I

In the great urban centers of Java, outward manifestations of change are most dramatically evident. Here an increasingly augmented elite of government bureaucrats and party leaders, only partly composed of former Javanese aristocrats but still highly conscious of rank prerequisites and prestige symbols, find themselves unable to realize the slogans of political democracy and economic opportunity with which they had awakened their followers to revolution. Impeded in their efforts by the unrealistic expectations of the latter, by their own lack of experience, and by the very magnitude of the task, they have become increasingly preoccupied with political power and its attendant forms of self-aggrandizement. At their periphery, and indeed often overlapping, is a newly-moneyed semi-elite of Indonesian traders, largely surviving through government protection and a symbiotic attachment to Chinese financiers.

Members of both these groups voice alternatively and even simultaneously the desirability of "modernization" and "return to our traditional values" while increasingly adopting consumption, recreation, and association patterns barely distinguishable from those of the European community with which they increasingly fraternize. They inhabit new houses in new suburbs, drive large cars and purchase, however prohibitive in price and regardless of quality, imported in preference to domestic articles. Mixed sports, receptions, and even cocktail parties are replacing the traditional family or clan gathering with its segregation of the sexes. Both men and women increasingly join clubs patterned after Western models. Their children are attending universities and colleges to obtain the all-essential degrees. In many instances professors are under extreme pressure to pass them and among students the phenomenon of "nervous breakdown" or psychosomatic disturbances is appearing. The younger women are preoccupied with charm schools, screen star magazines, and a number of them with public affairs and women's rights. Among the youth, "dating" and Western dancing is now common and an increasing source of disturbance to religious leaders.

1. This field work in connection with the Inter-University Study on Labor Problems and Economic Development was undertaken from September 1954 to June 1955.

Below these groups, the factory worker, artisans, petty traders, domestic servants, and other Kampong²-dwellers forming the mass base of the cities are caught in the spiral of inflation and beginning to articulate their dissatisfaction with more circuses and less rice. Their expectations, constantly stimulated by powerful labor unions and by the political speeches of their leaders, include not merely the obvious necessities of housing, food, and new sarongs for Lebaran,³ but shoes, bicycles, radios, sports, movies, and further education for their children. Where even the former are lacking, they resort to begging, petty thievery, and membership in gangs conducting "rackets".

Only among those recently arrived from the villages are there strong ties with the areas of origin, use of the ethnic language or ethnic clothing types. The older inhabitants refer to themselves as "Bangsa Indonesia" rather than "Bangsa Djawa" or "Bangsa Sunda", speak and read the national language, and complain about and evade traditional family obligations. They aspire to government work as chauffeurs, clerks, or messengers, lacking education, to higher positions for their children who obtain certificates, or to becoming a small entrepreneur with an "in" at some government office and a license to distribute some commodity. Barely able to meet basic needs, even with increasing involvement in numbers of petty economic transactions, they aim at becoming "big operators" and living in the style of their leaders. In short, the process of Westernization of Javanese urban society begun in the last century⁴ is proceeding at an accelerated pace at all levels in the cities with the accompanying tensions and disorganization of rapid urbanization.

II

After perceiving the rapid transformation of the large cities, the casual visitor to the towns and villages is impressed with their apparently static traditionalism. In the towns the only obvious change is the almost total disappearance of the European and Eurasian groups formerly attached to plantations and factories and the colonial government services. Their large old houses, somewhat in a state of decay and disrepair, are occupied for the most part by their successors as the dominant social elite--the rapidly proliferating civil servants, officials of the regency, district, or subdistrict governments of which the towns are the seats or of regional branches of central government agencies. Economically, the towns still serve as the trading centers to which agricultural produce and the products of some village handicrafts industries are brought for further shipment to the large commercial centers and to which a large variety of inexpensive manufactured goods find their way for sale in the

2. Kampong is the indigenous term for the sub-communities of largely bamboo houses which have arisen in back of and between the main arteries of the city or originally autonomous villages engulfed by the spread of the city.
3. Lebaran, the most important Islamic holiday, succeeds the month of fasting and purification and is the occasion when new clothes must be worn. Lebaran bonuses are customary in government, industry, and domestic work and where not given in cash are given in clothing.
4. See Wertheim, Effects of Western Civilization on Indonesian Society, IPR Paper No. 11, 1950, esp. Ch. II.

many shops on the main street or in the town markets and for further resale in the villages. This trade is still controlled and most of the shops owned by the Chinese or, in a few instances, Arab entrepreneurs. A few Javanese have in recent years opened shops and small trading establishments, but the majority of Javanese traders engage in small or sub-contracting transactions. In networks of clustered alleyways behind the main highway and a few subsidiary streets are found the combined homes and workshops of small family enterprises engaged in local food processing, hand weaving, wood or metal working, the independent tukangs or artisans such as furniture makers, town laborers, and petty tradesmen.

The elite in the towns are the pegawai or government officials, some of prijaji (aristocratic or semi-aristocratic) descent and others risen to present estate by virtue of the need for semi-educated civil servants. Uncertain of function and often confused by the variety, duplication, and inconsistency of the paperwork demanded of them by the national and provincial capitals, they labor tirelessly and far more sincerely than their equivalents in the latter and with much less tendency to abuse the power their positions confer in this period of increasing government regulation. Although many may not be indigenous to the town in which they are stationed--school teachers, army and policy officials may be frequently transferred--those in the upper ranks⁵ form a relatively cohesive social group. They generally live in brick and plaster houses of four and five rooms, maintain one or two servants,⁶ possess in addition to basic furniture linens, radios, glass and plateware, pictures, books and magazines, and an occasional piano. The men wear Western style trousers and shirts to work and have jackets for formal occasion, although may substitute sarong for trousers at home; the women retain their sarong-kebaja costume, although possessing numerous changes. Despite low salaries compared with rising prices, additional emoluments in the form of housing and clothing allowances, added increments for each child, provision of government cars or transportation expenses and a position enabling them to utilize credit purchasing to the utmost make it possible for them to maintain a standard of living substantially above that of the majority of townsmen.

They tend to marry and socialize among themselves, although not necessarily in the same town, frequently visiting relatives in other towns or even distant cities and their counterparts in neighboring towns. The religious and traditional holidays and ceremonials are the major occasions for large gatherings, the men sitting separately from the women. Otherwise the women are confined largely to their homes and numerous progeny, apart from shopping excursions and very occasionally accompanying their husbands to a film. The men are often out of the homes in the evenings--visiting friends, at the films or local dramatic performances, at political meetings, lounging in restaurants or simply walking around the town. Despite infinite, barely perceptible gradation among themselves, well-concealed rivalries and subtly malicious backbiting, externally they present an affable, harmoniously inter-acting social

5. Since most of the public utility companies, e.g., railroads, electricity, are also government or quasi-governmental agencies, their staffs as well as teachers, police and army officials, are among the pegawai.

6. These are more difficult to obtain, the pegawai accusing the domestic of becoming far too "independent" and the latter demanding fixed wages and hours in place of traditional subservience in return for subsistence security.

unit. The traditional pattern of assistance and responsibility for kin, financial, adoptive and preferential, still prevails despite entailing economic hardship. On the surface the formal structuring of relations between generations, i. e., respect for elders and passive acquiescence of the young, is observed with some deviations later described.

The commercial group, of whom the Javanese form a small proportion, in the towns attempt to keep their wealth hidden for fear of increased taxes, requests for assistance, and the intimidation to which non-indigenous groups are frequently exposed. Both the pegawai and this group fraternize on more or less equal terms but more as a matter of economic necessity and symbiosis than personal preference. The former make it possible for the latter to survive and profit in this period of licenses, permits, and allocations, and the latter assist the former to fill the gap between their official incomes and their actual expenditures. Neither group mixes with the lower-class kampong element or the villagers except functionally, with the major exception of political activity which will be further described in the succeeding section.

A somewhat generalized picture of village life would indicate no substantial changes in the traditional⁷ village community, except perhaps that the hadjis⁸ and village heads are getting richer and the other villagers poorer. The nexus of economic activity and related social organization is the land and its exploitation along traditional lines--the planting and harvesting of wet rice in the West Monsoon and of dry rice, corn, soya beans, tobacco, and other subsidiary crops during the East Monsoon--whatever may prevail in a given area. In East Java, with which I am most familiar, agricultural land is for the most part in communal possession, with a fixed number of inhabitants allowed hereditary rights over cultivation of fixed shares of more or less equal size or productivity and community obligations in respect to such activities as joint irrigation, road maintenance, etc. These are the tani gogol or core families; the land rights however, descend to only one of the succeeding generation, although kinship members of the same or older generations may have some share in the produce. Although various forms of share-cropping are traditional, population pressure and the reluctance of the villager to leave his village have forced the majority to become landless agricultural laborers in their own or

7. "Traditional" does not refer to "intact" indigenous patterns of pre-colonial periods since Hinduization, Islamization, and above all the introduction of the plantation system over wide areas of Java with its extension of trade, communications, and education have continually forced accommodation of the Javanese village to external influences. Yet the very gradualness with which the forms of economic behavior and social institutions have altered even in recent periods in the villages is apparent if one compares descriptions in the "Onderzoek naar de Mindere Welvaart der Inlandsche Bevolking op Java en Madoera" publications (Batavia, 1910) with present patterns.
8. The hadji narrowly refers to the man who has made the pilgrimage to Mecca. But in the village he is also likely to be the wealthier peasant who rents shares in addition to his own and trades in agricultural produce and/or owns the leading handicrafts establishment. His possession of capital enables him in this period to profit at an increasing rate from the needs of his fellow villager or townsman.

adjoining villages on a cash wage basis. In some villages small enterprises such as brick and tile making have long provided a major livelihood for a few and a subsidiary income for some agricultural laborers in slack season. A major occupation of the women has been the transportation to and/or sale in the town marketplace of small quantities of village produce and/or the purchase from the latter of goods in demand in the village and their resale in smaller amounts at infinitesimal profit margins.

At the apex of village society and authority still stands the families of the village heads and his assistants, the wealthier shareholders, the religious leaders, and an occasional enterprise owner; at the base are the landless laborers to whom the former feel some measure of responsibility in providing work even when rationally of dubious economic gain to himself. With the exception of the hadjis who occasionally have houses of brick similar to those of the town pegawai, the majority of villagers dwell in simple bamboo-plaited houses with a bare minimum of furniture and utensils. They are generally without cash except after harvest and often exist from day to day on a system of mutual borrowing and inter-family indebtedness if not constant indebtedness to the richer villagers or the town pawnhouse. The custom of gotong-rojong or exchanged voluntary labor and communal assistance in times of misfortune still prevails in the more rural villages. The purchase of clothes or other items of external labor generally occurs once a year, before Lebaran after the spring harvest.

Apart from work, religious observances, customary holidays, and family observances constitute the main fabric of village life and are even more punctiliously and enthusiastically observed than in the towns. For the selamatan, the celebration feast, families often incur heavy indebtedness for long periods, leasing their fields or selling tangible property or simply borrowing.⁹ These celebrations are often accompanied by the traditional forms of music-drama, the ketoprak and in East Java the lutruk, and since amateur village performers have been largely supplanted by hired professional troupes, they constitute a major expenditure for the feast-giver. Outside of these occasions when activity is prevalent throughout the night and villagers attracted to neighboring villages or to the town, the villagers rarely stray far from their own community or even after sunset from their own houses, apart from expeditions imposed by the nature of their work, e.g., trips to the market or to obtain wood. An occasional card game or gambling among the men and gossiping among the women provide their major daily recreations. For the villager the town is a source of confusion and uncertainty; villages beyond those bordering on his own are somewhat remote worlds; only in his own does he derive the security of knowing what to expect, and he prefers to leave

9. The costs of many selamatan observed ran as high as three or four times the yearly income of the giver, although partly defrayed by gifts received, often in cash. In addition to its mechanism as a prestige-gaining device, the feast is often viewed as a means of investment in the expectation that the more guests and the more promising the entertainment, the greater the return. In many instances, however, either the miscalculation of the hosts or the economic circumstances of the guests, who in turn appeared to calculate their gifts on the basis of what they had received or might expect on similar occasions, produced net losses rather than visible gains.

contact with the external world insofar as possible to those delegated to deal with it--the village head and his assistants.

Among both villagers and townsmen class distinctions and respect for age and status are formally preserved in modes of address and speech,¹⁰ in degrees of inhibition, restraint, or familiarity in gesture and posture, and in the numberless subtle and tenuous ways in which the Javanese reveals his awareness of his place in the social order. And by the same token, the villager and especially the upper class townsman still view each other with the polite distrust bred of unfamiliarity and the consciousness of a different environment.

Mediating between the pegawai of the town and the self-contained villagers are the lower class denizens of the clustered alleyways of the town, the kampong people. Disoriented from the village, in proximity to the town pegawai and in some instances having been exposed to the city, they form a spectrum reflecting in its range varying degrees of the characteristics of all. Living in homes that differ little from those of the villagers, they cling to vestigial remains of gotong-rojong and community responsibility and often rely upon the authority and direction of the kampong head and community sanction rather than upon individual decision and autonomous activity. But their consumption pattern has broadened to include commodities formerly limited to the town elite--shoes, bicycles, fountain pens, watches, an occasional radio. Many have more than the rudiments of literacy, an awareness of and curiosity about the world external to the immediate community. They frequent the movie theater as well as the Javanese drama, the polyclinic in addition to the Javanese dukun or folk-healer. The males spend more leisure hours in the streets than in the homes and the women appear less passive and more self-determined than the female villagers.

Although the forces unleashed by the revolution, indigenous government, and recent inflationary pressures have affected somewhat the town elites and in more remote fashion some villagers, despite the surface impression of only slight change, it is particularly in the lower class of the town I studied that their impact is most visible. Insofar as this town-village complex may be typical of others in Java, the factors of change to be described may have some general relevance for a wider area.

III

Namakota,¹¹ the district center for four sub-districts and sub-district center for fifteen administrative desas or village units with a total population of 32,159, generally conforms to the pattern described in the previous section. Like many Javanese towns, it stretches along a highway which forms its main street and includes at one end a railway station, a movie theatre, several schools, and the marketplace, interspersed with rows of shops. Somewhere

10. Indonesian, despite government and school encouragement, has not widely supplanted the caste-structured Javanese language in daily use, although most villagers are now familiar with it.

11. Namakota is a fictitious name.

near the center is the alun-alun or traditional village square bordered by a large mosque, the post office, and the imposing residence of the district head flanked by several administrative offices. Beyond the square the street includes a hospital, an army barracks, more schools, a police encampment, other offices, and numerous homes. Branching off the main street in several directions are smaller streets, several of which lead to neighboring towns and others fading off into the satellite agricultural villages and an occasional fishing village.

As with many towns in East Java, Namakota was long dominated by the sugar industry, and much of its surrounding agricultural land was leased to two sugar factories in the vicinity. When they closed during the sugar depression of the early thirties, Namakota suffered an economic decline. One of its consequences, however, was the stimulation of indigenous handicrafts enterprises; and at the present time there is a concentration of handicrafts jewelry establishments in one section of the town and an agglomeration of homes where copper utensils are fabricated in an adjoining village. Large-scale industrial activity was revived in Namakota as well as several other towns in the general area shortly before World War II with the establishment of textile factories on the sites of the former sugar factories.

Of the labor force of approximately 1100 now employed by the factory in Namakota, the earliest recruits and the older workers were drawn from among the petty traders and artisans of the town, former sugar factory employees, and the landless agricultural laborers. The upheavals and migrations accompanying the Japanese occupation and the revolution drew others into the town and the factory: returning natives of the area and children returning from other areas to which they or their parents had previously migrated; veterans demobilized in the town and those who had married women from the town; those seeking work from not too distant villages. The town population includes not merely Javanese, Chinese, and Arabs, but members of other Indonesian ethnic groups--Madurese, natives of Borneo, a few Sumatrans and Menadonese. The non-Javanese live mainly within the confines of the town with the exception of some villages which have long been inhabited by Madurese.

Among the factory workers, railroad workers, artisans, chauffeurs, tradesmen, lowest-level clerks, and others who constitute the town kampong dwellers are evidences of dissociation from traditional patterns most externalized. On the one hand this group exhibits the most active response to elite-instrumented agents of change such as political party activity and education programs. On the other it constitutes a mechanism by which other agents, such as the factory, acts upon the villagers. Institutional modifications are of course the result of a number of interacting factors of which political parties, education, a factory system, and inflation are merely four which impressed this observer; but for purposes of convenience, they may be described under these headings.

Political Parties and Group Formation

One of the most striking phenomena observed was the increased activity of political parties, especially during the year preceding the first national elections. In and around Namakota sprouted not only district and sub-district

branch offices of the major political parties and a few minor ones but sub-branch offices appeared in almost every village, generally in the homes of party members. In addition to public rallies and speeches in the town square, meetings in smaller community units, there formed numerous committees and action groups frequently meeting in various members' homes.

The organization impetus for such activity comes from above--from the government pegawai, the factory staff members, and in the instance of the religious parties, the religious teachers and mosque officials. The initial stimulus is of course Djakarta, from where it has filtered by stages through the provincial and regional capitals to the local centers such as Namakota.

One of the observable results in the latter is the effect on association patterns and interpersonal relationships. In the competitive effort to gain the support of members of other classes, the political leaders from the elite group woo promising members of the latter--into their committees, to their homes, and occasionally by invitations to family functions in which the latter would not, status-wise, be included. They visit the homes of the latter, not with the polite condescension or inquiry attached to their functional duties, but as petitioner or special pleader--a temporary reversal of role assuming the fiction of equality. I still recall the pride with which a factory worker informed me that the district head came to his bamboo hut for a committee meeting, adding that he was now a person of consequence in the eyes of his fellow villagers. The degree to which such association will affect social stratification and nibble at class barriers depends upon the extent to which the isolated instances observed become repetitive.

Probably more significant is the existence of the political party as a group which tends to cut across as well as coincide with traditional groupings. Formal groups are nothing new among Javanese to whom collective action is infinitely preferable to individual autonomy, but their nexus has generally been familial, religious, or economic needs. Simultaneous membership in several groups has been effected with a minimum of friction or strain on loyalties, so that a villager may be a member of an organization guarding the village at night, an agricultural cooperative, and a religious society, while his wife is a member of an arisan¹² in the market. Perhaps precisely because of this prior association, much political identification has tended to coincide with it--the farmer who has received Islamic education tends to join the Orthodox Religious Party, the small merchant the Masjumi, the second-generation railroad worker the Communist Party, and the new government bureaucrat the Nationalist Party. But there has also been a tendency for political party affiliation to transcend

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12. The arisan is a fund-raising association to which members contribute a stipulated sum regularly drawing lots in turn for the total sum. Its objective is the acquisition of a larger amount in cash at one time than the individual member can accumulate by personal saving, since temptations for immediate disposal of available cash are too great whereas group social pressure has a subtly coercive influence prohibiting him from withholding regular payments. The market-sellers use it to accumulate capital, other groups to finance major purchases for members or enable them to repay debts. The arisan also provides an excuse for a social get-together and the excitement of gambling without the risk.

traditional groupings and also to impair them. Associations such as cooperatives and unions have been reorganized or splintered on a party basis. Family relationships have been strained by different party loyalties among its members. When my nearest neighbor changed his party affiliation, a drastic shift occurred in the visitors to his home, and he was barely spoken to in homes to which he had been eagerly welcomed earlier. I was informed of two instances of divorce on the basis of conflicting party attachments.

These consequences are less obvious in communities more remote from town where the peasant tends passively to accept the imposition of political party membership as another requirement emanating from higher authority. His affiliation generally reflects prior identifications--religion, the family head, the village head. Informed by government information officials that he must make a choice of party and fulfill his obligations as a citizen by voting, he frequently resorts to his village head for advice. Near Namakota were observed several communities with nearly identical socio-economic structures in which different parties were dominant according to the allegiance of the village heads. But the lower class elements in the town exhibited fluctuating political allegiances based upon a variety of inducements and pressures.

The political party itself is an agent in the formation of new associations with ostensibly non-political objectives. Of the five women's organizations in town, only one was not in essence the feminine wing of a political party. Three scout troupes, several youth organizations, and some small traders' associations also appeared to have underlying party affiliations. The factory union had recently split into two unions on a political basis, and the larger of its successors, composed of several political factions, was threatening to fractionate further.

Isolated examples do not necessarily constitute a trend. Several instances were observed, however, which might indicate that the political leader is assuming the prerequisites of traditional authorities. An unmarried pregnant factory worker whose family lived in a remote village applied not to her kampong head or to the official charged with the moral guidance of the inhabitants but to her political party leader for assistance in forcing the male in the case to marry her. Several family disputes were mediated by a party leader and a number of instances observed in which the party leader, rather than the neighborhood association, was asked for financial assistance.

The ideals of the revolution and of the political parties have affected the value-laden verbalizations of the townspeople, if not their value-determined behavior. Initially direct attempts to obtain from both elite members and factory workers information on personal non-familial associations and status differentials invariably produced statements to the effect that now everyone is equal in the new democracy and differences of rank no longer exist except functionally. In actuality, kampong inhabitants entered my house, waited outside, or cut short their intention of visiting me according to whom else they observed to be sitting in my front room. The decision appeared to be based not upon prior acquaintance with my other guests, but upon their rank and class.

If official tokens of respect and outward symbols of status differentiation are maintained, there nevertheless exists, especially among the factory

laborers, a strong sense of egalitarianism. Some privately express resentment at the social distance maintained by the officials who in public utterances reiterate phrases about democracy and equality. Within the factory this has resulted in unofficial boycotting of several foremen and one case of petition demanding the removal of one whom the workers would not accept. Supervisory factory staff complain that they cannot exercise authority in direct modes as formerly, but most at every step consider possible reactions of workers. Pegawai wives find their servants occasionally "talking back" or disappearing if burdened with what the latter consider excessive demands. A retired government official attributed some of the ineffectiveness of current agricultural programs to the necessity for persuasion, whereas he could formerly impose technologically needed measures by ordering a few recalcitrant farmers to be beaten as an example. It cannot be inferred that egalitarian notions necessarily are resisted by the elite, for many acquiesce and indeed encourage them officially; they are perturbed, however, when confronted with their consequences. In general those with higher status tend to exercise their prerogatives with caution and those without to accept them a little less readily.

Education and Aspiration

In Namakota there is at least one primary school of six grades for every two village units. In two instances where funds for the establishment of a school could not be obtained, villagers, stimulated by their heads, raised money for supplies and contributed their labor to erect simple school buildings. The largest elementary school in the town has a long waiting list of applicants and is operated in two shifts. There are two government secondary schools, one especially for the training of elementary school teachers. Three large Islamic religious schools, one Chinese school, and numerous unofficial "courses" conducted by individuals dot the town. As I was leaving, a woman's organization was discussing ways and means of raising funds to establish a domestic science school for girls. Adult literacy courses are conducted in several of the villages; general education courses are offered several times a week in back of the district head's residence. Funds are meager, teachers insufficient (many carry a double load), texts sent from the education offices frequently delayed, and part-time volunteers among the educated conduct the adult education and illiteracy courses.

The extreme interest in education is a fairly recent phenomenon. The pegawai and commercial groups sacrifice to send their children to neighboring cities for higher secondary education; the kampong people to give theirs primary and lower secondary education in the town; and the villagers begin to send theirs to the village primary schools, although the last is largely the result of continual urging by government officials. With the exception of religious groups which tend to resist education of women or occasionally permit a form of segregated schooling, the schools are filled with as many female students as male, and the secondary schools in the town include students from fairly remote agricultural villages.

The desire for education reflects not merely an interest in it per se, but an aspiration for social mobility. Through education, it was emphasized to me, the daughter of a farmer could become a school teacher, the son of a factory worker a government clerk. The occupational values of the pegawai, of the former prijaji or aristocratic element, are filtering down and the ideal

has become the prestige of status and absence of menial endeavor combined with some economic security connected with government work. This is often rationalized in terms of professions of patriotism and public service. Of a number of school children queried on ultimate goals, there emerged a striking unanimity of expression of noble ideals and service to the state and an almost complete absence of specific career or vocational aims. A few expressed an interest in the opportunities to travel afforded by a teaching career.

Especially in the lower class of the town, a minimum of education seems to result in a loosening of sanctions imposed by the family and community and a degree of autonomous action on the part of youth groups. The almost universal phenomenon of parental complaint over the loss of respect for traditions and obligations accompanied by parental pride in the "modernism" of the children recurs here. Youth evinces its independence in resistance to early marriage, in reluctance to assume occupational roles of the parents, even in the absence of other alternatives, in recreation patterns emulative of its Western counterparts. The respect of illiterate or semi-illiterate elders for even a slight degree of education and the intimidation resulting from the preponderance of youth in the bands of revolutionists have led to the reluctant acquiescence of the elder generation in youthful assumption of semi-authoritative roles. For example, codes of morality are enforced and their infractions punished in several villages observed not by the officially constituted authorities, but by the pemudas, associations of young men.

Among the youth of the pegawai the old formalities are dutifully observed in the presence of the elders with some degree of internal strain, but dropped among themselves and with outsiders. Young men requested beer of me when offered the usual non-alcoholic refreshment and an occasional young woman, cigarettes. Both requested instruction in Western dancing and curiosity about Hollywood dominated their questions on American life. Among the youth of all classes, Western dress seems rapidly to be replacing traditional costume, although the latter is assumed for official functions. At two weddings attended in the kampong, however, the bride was seen to wear Western-style bridal attire rented for the occasion.

In the kampong as well as among the pegawai, printed material--news-papers, magazines, and pamphlets achieve wide circulation, being passed from hand to hand, and read aloud by the literates to those who cannot read. The return of former city-dwellers to villages of origin during the Japanese occupation and revolution has been an indirect educative influence. While the sophistication of some of these expressed in a degree of subtle arrogance for the naivete of their neighbors provokes hostility, others are looked upon similarly to the village head as mediators between the untravelled villager and the forces that impinge upon him from the external world.

The Factory and Inflation

The recent inflation has provoked responses that permit agents of change such as the factory freer play. For whereas during its inception, the factory had difficulty in recruiting workers and often closed down at peak agricultural activity, now economic hardship attracts several new elements into

factory work. From villages in an ever-widening radius come not only the landless agricultural laborer but the shareholder who is squeezed between the controlled price at which the government purchases part of his rice harvest and the rising prices of such commodities as textiles. He may originally be motivated to enter the factory simply for cash to pay the costs of seed and labor,¹³ and a triple-shift system in the factory enables him to continue to devote some of his efforts to the land. Once in the factory, however, he tends to stay, perhaps leasing part of his land to a sharecropper or arranging to have it worked by trusted relatives. From the town come the youth with four to six years of schooling and thus members of individually cohesive communities are exposed to each other and to larger group membership.

Formerly the recruit from the village tended to move into the town, but the extreme housing shortage at present prohibits this type of migration. His gradual acculturation to town patterns with his continued residence in the village thus exposes indirectly his fellow villagers to some aspects of the town life. This acculturation is indeed gradual, and the outlying villages cannot yet be said to have been greatly influenced by the inhabitants who commute to the town. However, the process is evident in the closer villages in several respects, particularly in expenditure and recreation patterns.

Whereas the agriculturist, needing money outside of harvest time, has recourse only to the money-lender or the government pawnshop where is required security he is often unable to provide, the factory worker has a regular income and two yearly bonuses. What is more important, however, is the latter's ability then to receive credit from the shopowners on long-range purchases at heavy rates of interest. Thus he acquires a fountain pen, watch, bicycle, and even perhaps a second-hand radio. And as these find their way to the village, new wants are created. Farm households may expend disposable harvest income on a bicycle rather than an additional goat or as disposable income is diminished by inflation, agrarian dissatisfaction is further increased.

The factory worker is a member of a factory arisan,¹⁴ of a union, and often of a football team. As an arisan member, his opportunities for credit purchasing are increased as his creditors can expect full payment on his pay-off day. As he becomes more committed to factory work, he appears on the groups before his shift begins, stays latter, fraternizing with co-workers in the union-sponsored eating cooperative. His actual weekly take-home pay may be only one-third of his earnings after deductions for food at the cooperative and installment purchasing. Much of it will be spent on movies--some are at the local movie theatre with every change of bill when not working on

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13. Partly because of the traditional communalism of Javanese villages and the consequent obligation to share existent work opportunities, labor on the land is highly intensive, and 20 men may be employed to clear one hectare of land in a day, or 30 women to harvest half of that in a morning. Since payment is now generally in cash plus food while working, the shareowner is frequently in need of money.
 14. The arisan is not confined to factory workers and market-sellers alone, but is an institution existing among all levels. The pegawai are in one for Rp. 100 per month, the housewife of the kampung is in with her neighbors for Rp. 1 a week.

the night shift. Whereas the worker still professes formal Islam, he is less observant of its rituals, fasting perhaps two days of the fasting month and making less use of factory time allowances for prayer and mosque attendance. He is more out of his home, visiting friends in other areas and forming additional marital or extra-marital attachments outside his sub-community. To him the kampong heads and officials become less formidable figures, and while he greets them with outward signs of respect, he tends more to regard them in an egalitarian fashion.

The villager turned new factory worker maintains close identification with the village insofar as he still identifies with the land. Factory acquaintance does not necessarily lead to increased extra-factory interaction among workers of dispersed villages, although within the factory the farmer socializes more with the farmer from another village on the basis of mutual interests than with the town worker. A few, however, have gradually become subject to the temptations of the townsman described above. While retaining their rights to land, they delegate its operations to others and pay other villagers to act as substitutes in the performance of village obligations.

In the case of female workers from both the town and the remote village, the factory appears to exert a marked influence. Initially, female recruits were from the ranks of widows or divorced women left with the support of their children. Now wives of workers follow their husbands into the factory, complaining that once the husbands' incomes are removed from the locus of the households, they see little of them and must therefore support themselves and the children in large part. Sometimes the wives and daughters of landowners rather than the latter enter the factory. Sometimes the motive is the acquisition of a husband as, despite the segregation of male and female workers, opportunities to improve acquaintance are manifold.

The village woman who formerly possessed one ragged set of clothes for daily wear and one presentable set for the holidays soon follows the example of her female colleagues and puts most of her wages on her back and around her neck or wrists. She too wants and ultimately acquires a bicycle. As new acquisitions become more customary and more costly, she may be enticed into casual prostitution, being removed from the constraining eyes of her neighbors. Conservative and religious men have expressed fears of allowing their wives to enter the factory on the grounds that factory women become extravagant, neglect their home duties, no longer obey their husbands, and tend to become attracted to and involved with other men. There is no doubt that the factory woman tends to lose traditional submissiveness and shyness. I had no difficulty in obtaining rapport with factory women, whereas considerable effort was required with female land workers from the same villages.

My impression was, although statistics were unobtainable, that marriage and divorce patterns are undergoing alteration as a consequence of factory employment. Although polygamy is allowed by Islamic law, it is the rare villager observing its prerequisites who can afford more than one wife. It has been more common among the traders, whereas the stationary villager has been inhibited by the nature of his work and close community ties and prescriptions. Added temptation and opportunity provokes extra-marital activity and although he may be forced into marriage to legitimize expected progeny, the factory worker more quickly has recourse to divorce when the financial burden becomes excessive or another temptation presents herself. Women

workers are desirable marriage objects, especially if several can be induced to contribute substantial shares of their earnings to one husband. While domestic responsibility on the part of the male is decreasing, increased assertiveness on the part of the female leads her to request an unsatisfactory mate to divorce her in the hopes of obtaining a better successor.

Villagers entering the factory almost automatically become union members, but in general, and especially the women, exercise a passive role in the functioning and policies of the unions. Since membership in the same union extends from the unskilled worker up through the ranks to the staff officials (i. e., all but the very top management), with rare exceptions the elected officials and union board members come from among the ranks of the latter. The degree of active participation, except indirectly through shop stewards, seems limited by traditional respect for authority and education. Among some male town workers, I have heard private grumbling about the control from above, but the village workers accept this as the natural hierarchic order of things.

The factory and to a larger extent perhaps inflationary conditions have contributed to a decrease of group responsibility for the welfare of individual members. One hears complaints on the one hand of the oppressiveness of traditional family favoritism in the allocation of employment opportunities; on the other the lack of neighborly concern for welfare and the disappearance of gotong-rojong is deplored. Traditional forms of reliance and of trust have disappeared in the town and even villagers in small units evince suspicion of pilferage proclivities on the part of villagers in the next unit.

There is an increasing interest in informal trading activities among those who have never to any large extent participated in them. Factory workers form groups to purchase and peddle cigarets among their fellows; factory foremen have some difficulty exercising authority who are engaged in selling bicycles on time payments to their underlings.¹⁵ Even an occasional staff member combines with a village trader to dispose profitably of unused residue from factory stores. Women who previously lent out rice to neighbors now charge interest. More and more activities formerly based on a network of social relationships are assuming an economic cast.

To what extent the factors described will blur the distinction between lower class townsmen and villagers, unbalance traditional status relationships and modify both town and village institutions remains to be seen. An acceleration of these tendencies may change Javanese social structure and cultural orientation appreciably within one generation in those areas most exposed to the influences outlined.

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15. The difficulty of legal enforcement of debt obligations today gives debtors a whip hand over creditors.

CITY HIERARCHIES AND THE DISTRIBUTION OF CITY SIZE*

I. Structural Proportions in a Hierarchy of Cities

In the classical tradition of location theory let us assume a homogeneous plain over which all resources are distributed at a uniform density. How can this uniformity generate a discrete and highly stratified network of cities? This has been the central problem in Lösch's theory of location [6]. Of course, the ultimate answer lies in the indivisibility of certain economic operations and the resultant economies of scale in performing the production and distribution functions of cities.

The very simplest model of a city hierarchy would run along lines somewhat like the following. There is a basic layer of rural population settled at a uniform density, or alternatively there is a random scattering of the smallest communities with an approximately uniform areal density. The first layer of "cities" superimposed on this basis consists of centers performing the most elementary production and distribution functions. Their market area is usually limited by the largest distance that is tolerable to the rural population which it serves. As to the size of this and the following orders of cities, we make the following fundamental hypothesis: the size of any city is proportional to the population it serves (including that of the city itself). Then if r is the rural population in the market area of the cities of the first layer, k the proportionality factor, and c the city size, then

$$c = k(r+c) \quad \text{or}$$

$$c = \frac{kr}{1-k}.$$

$\frac{k}{1-k}$ is therefore the effective "urban multiplier".

The question now is what body of population will generate the next higher order of cities. Here we make another basic assumption, which is related to the idea of the "span of control" in administrative hierarchies. This is that cities of each order (but the lowest) have a fixed number of satellite cities of the next lower order. For this assumption to make sense it is not necessary to regard cities as administrative seats. For instance, in one of Lösch's purely economic models of location there are three satellites to each city [6, pp. 431-434].

With the two assumptions made, it is now possible to derive the size p_m of cities of each order m and the population P_m served by these.

* This paper was first written at the Center for Advanced Study in the Behavioral Sciences. I am indebted to Carl Christ for various comments.

Assumption 1 says

$$(1) p_m = kP_m$$

and assumption 2

$$(2) P_m = p_m + sP_{m-1}$$

Substituting (1) in (2) we have

$$P_m = kP_m + sP_{m-1} \quad \text{or}$$

$$P_m = \frac{s}{1-k} P_{m-1} = \left(\frac{s}{1-k}\right)^2 P_{m-2} = \dots = \left(\frac{s}{1-k}\right)^{m-1} P_1$$

$$\text{But } P_1 = r + c = r \left(1 + \frac{k}{1-k}\right) = \frac{r}{1-k}$$

$$\text{Thus } (3) P_m = \frac{s^{m-1} r}{(1-k)^m}$$

$$\text{and } (4) p_m = \frac{ks^{m-1} r}{(1-k)^m}$$

(3) and (4) make the following statement: both city size and population served increase exponentially with the level of the city in the hierarchy.¹ The factors governing the proportions are

the size of the basic rural community r
the ratio k of city size to population served, and
the number s of satellites per city.

When m assumes its largest value, N (say), then (3) describes a relationship between total population P , the size of the smallest community r , and the number of ranks in the city hierarchy N :

$$(5) P = P_N = \frac{s^{N-1} r}{(1-k)^N}$$

This may be written in other ways, e.g.,

$$r = \frac{(1-k)^N}{s^{N-1}} P \quad \text{or}$$

1. I.e., in the same way as in an organization for which the limitation of the span of control applies at each level.

$$(or) \quad N = \frac{\log (Ps/r)}{\log \left(\frac{s}{1-k}\right)} .$$

A second relationship exists between the total number of cities T , the number of ranks in the hierarchy N , and the number s of satellites per city:

$$(6) \quad T = 1 + s + s^2 + \dots + s^N = \frac{s^{N+1} - 1}{s - 1}$$

To summarize, there are six variables k , r , s , P , N , T . If certain of them are given, the others are determined by the model. E.g., if k , r , s and P are given, then T and N can be calculated. Or if r , s , P , and T are given, then k and N may be computed.

II. The Rank-Size Rule or Pareto Distribution

According to our model, cities when ranked by size show approximately the following pattern. There is one largest city, there are s cities of the next largest size, s^2 cities in a third size class, and so on. The first city in the n th size class takes $1 + s + \dots + s^{n-1} + 1$ place in this array, or we may say it has rank $\frac{s^n - 1}{s - 1} + 1$. The city halfway in the n th size class has rank $\frac{s^n - 1}{s - 1} + \frac{s^n}{2}$ (or the nearest integer thereto), and this is approximately

$$s^n \left(\frac{1}{2} + \frac{1}{s-1} \right) .$$

Its size, as given by formula (4), is

$$P_{N-n} = \frac{kr}{s} \cdot \left(\frac{s}{1-k}\right)^{N-n} .$$

The product of rank and size is therefore

$$(7) \quad \frac{kr}{s} \cdot \left(\frac{1}{2} + \frac{1}{s-1}\right) \left(\frac{s}{1-k}\right)^N \cdot (1-k)^n = C \cdot (1-k)^n$$

where C is a constant.

The conclusion of the last section that all cities on the same hierarchical level have equal size must of course be understood as not more than a rough approximation. It is more realistic to assume that the factors $\frac{s}{1-k}$ by which city size is blown up from each level to the next is a random variable. After a fair number of such multiplications, the product will itself show a distribution pattern (in fact, that of the log normal distribution). As a result the steps in the rank size diagram are thus smoothed out, the distinctness of the size classes is lost, and (7) applies in effect throughout the size classes.

Now since k is small relative to 1,

$$(1-k)^{-n} = \frac{1}{(1-k)^n} \approx 1 + kn \text{ is almost constant. We conclude that}$$

rank * size \approx constant. This is the statement of the so-called "rank-size rule" for cities, an empirical regularity of which much has been made by K Zipf [9]. Its first discovery is due to F. Auerbach [2]. The "rank-size rule" says that the size of the n th city is approximately one- n th of the size of the largest city. Now the standard form for economic size distributions is in terms of $N(x)$ the number of individuals (cities) with a property (size) greater or equal to x . Under the rank-size rule there are n cities of size greater

or equal to $\frac{P_N}{n}$, where P_N as before denotes the size of the largest city.

Thus

$$N\left(\frac{P_N}{n}\right) = n.$$

This equation is solved by

$$(8) \quad N(n) = \frac{P_N}{n}.$$

Let us compare $N(n)$ with the more general class of Pareto distribution which applies to many social parameters, in particular income above a certain level [5]:

$$(9) \quad N(x) = \frac{A}{x^a}.$$

We see that the rank-size rule (8) is a Pareto distribution with exponent 1.

In summary, we have shown that the empirical rank-size rule, as observed by Zipf, is compatible with the ideas on hierarchies of market areas and their central cities as developed by Lösch and other location theorists. Let us now look at some alternative approaches to city size distributions.

III. Allometric Growth and Alternative Explanations

The problem of city sizes has attracted mathematically minded scientists in various fields, including biology, sociology, and economics. Economists do not deal usually with city size as such, but with broad types of distributions which apply to income and plant size, and incidentally to city size. Principal candidates are the Pareto distribution [7] and the log normal distribution [5]. Stochastic processes of great intuitive appeal have been suggested, for which the distribution of final states turns out to be Pareto [4], [8] or log normal [1]. This field is too broad to be properly surveyed here.

Of the sociological contributions we have mentioned Zipf's empirical work [9], but his analysis is more in the nature of metaphysical speculation than of a well defined model.

Biologists have discovered a law of allometric growth [3] in the development of organisms and have suggested that it applies to social phenomena as well. The principle of allometric growth states that the rate of relative growth of an organ is a constant fraction of the rate of relative growth of the organism. Let x be the size of the organ, y that of the organism. Then

$$\frac{dx}{dt} / x = \frac{1}{a} \cdot \frac{dy}{dt} / y \quad \text{or}$$

$$\frac{d \log x}{dt} = \frac{1}{a} \cdot \frac{d \log y}{dt}$$

$$\text{and } \frac{d \log x}{d \log y} = \frac{1}{a} \quad \text{Integrating we obtain}$$

$$\log x = \frac{1}{a} \log y + \log b \quad \text{where } \log b \text{ is a constant of integration}$$

$$\text{or } (10) \quad x = b \cdot y^{\frac{1}{a}}.$$

A relationship between allometry and the Pareto distribution can be established as follows.

Under a Pareto distribution

$$(11) \quad N(x) = \frac{A}{x^a}$$

total urban population is

$$P = \int_{p_1}^{\infty} x d\left(-\frac{A}{x^a}\right) = \int_{p_1}^{\infty} \frac{x A a}{x^{a+1}} = a A \int_{p_1}^{\infty} \frac{1}{x^a} = \frac{a A}{a-1} p_1^{a-1}$$

provided $a > 1$. It follows that

$$(12) \quad A = P p_1^{1-a} \cdot \frac{a-1}{a}.$$

The size $p_N = x$ of the capital city is determined by setting

$$1 = \frac{A}{x^a} \quad \text{in (11) so that}$$

$$x = A^{\frac{1}{a}}$$

$$= P^{\frac{1}{a}} P_1^{\frac{1-a}{a}} \left(\frac{a-1}{a}\right) \quad \text{or}$$

$$(13) \quad p_N = b P^{\frac{1}{a}} \quad \text{where } b \text{ is a constant.}$$

This is the same relationship as that generated by allometric growth (10) if we identify the capital city with an organ and total urban population with the organism. In the Pareto distribution and in the allometric model, the parameter a is undetermined, except that it must exceed 1 in order that the Pareto distribution should add up to a finite population.

H. Simon [8] has developed a model in terms of a stochastic process which in some sense represents the discrete analogue to continuous and allometric growth. In his model the exponent $a = 1$ results when the rate of growth at the lowest level is small. A particularly attractive feature of Simon's stochastic process is that it explains the distribution of various other social parameters as well.

The model of section 1 on the other hand is quite specific to city hierarchies. The parameter a turns out to be unity because of the assumption (1) of proportionality between the population of a city and the population served by the city. The allometric equation (13) with $a = 1$ is the statement of this proportionality for $m = N$.

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ECONOMY AND SPACE*:
A REVIEW ARTICLE

"If everything occurred at the same time there would be no development. If everything existed in the same place there would be no particularity. Only space makes possible the particular, which then unfolds in time."

--August Lösch, The Economics of Location

I

It is the recognition of order in the spatial incidence of economic phenomena that lies in the background of the path-breaking study before us. That man's social, political, and economic activities have geographical dimension is so well known to our everyday experience that few of us ever pay heed to it. Thus we are familiar with concentrations of activities that we call cities; we are--often painfully--aware of distance; industrial areas, agricultural belts, mining regions are words that have entered the vocabulary of our common speech. But it is far less widely recognized that there is also an order in spatial arrangements which is dictated by the logic of location decisions. It was left to the economists to develop an analytical apparatus that would deal with this order and lead eventually to a unified theory of location and space-economy.

The governing thesis of Isard's book is that economic life has not only vertical (functional) structure, but horizontal (spatial) structure as well; that the ordering element in the case of the latter is distance and the cost necessary to overcome it; and that this order, though subject to change and fluctuation, tends towards an equilibrium position. The elaboration of this thesis, the construction of a "rationale" to account for variability as well as order in the spatial arrangement of economic activities, and the integration of this "rationale" with modern equilibrium theory is Isard's remarkable achievement.

Location analysis is a relative newcomer to the United States as, indeed, it is to most countries of the world. As late as 1952, for example, it was still possible to treat of location economics only incidentally in chapters devoted to other subject matter, as in A Survey of Contemporary Economics (Vol. II), published by the American Economics Association. In a stimulating chapter, Isard traces the origin of theoretical thinking on location, discussing the theories of von Thünen (1826), Weber (1909), Predbhl (1925), Engländer (1926), Weigmann (1931), Ohlin (1933), Palander (1935), and Lösch (1940), all of them representatives of the so-called German School of

* Walter Isard, Location and Space-Economy: A General Theory Relating to Industrial Location, Market Areas, Land Use, Trade, and Urban Structure. Boston: The Technology Press of the Massachusetts Institute of Technology, and New York, John Wiley and Sons, Inc., 1956, 350 pp.

Economics. Perhaps it was an interest in policy questions--and the German State had traditionally played a more active role in directing economic activities than in Anglo-Saxon countries--that created this tradition of scholarship turning on questions related to the spatial distribution of investment, production, and consumption. It was practical questions, too, that later stimulated similar researches elsewhere--in England, where problems of "depressed" areas and of industrial decentralization had to be faced; in the United States, where the second World War for the first time posed the problem of the "proper" distribution of industries, and in other countries.

Perhaps because of this policy orientation the preferred approach was, in a majority of cases, frankly historico-empirical: existing patterns of location were studied, occasionally in the perspective of evolution, and low-order generalizations were attempted to provide a limited rationale for the characteristics observed. The name of P. Sargant Florence is especially linked to this type of analysis (see his contribution to the report on industrial location patterns in the United States prepared under the National Resources Planning Board in 1942 as well as his more recent study on Investment, Location, and Size of Plant, Cambridge, 1948). A radically different analysis, however, was evolved by some German and Swedish economists and carried forward in the United States by W. H. Dean, Jr., E. M. Hoover, and by Walter Isard. Their efforts moved on a different plane of analysis, attempting, by assuming economically rational behavior on the part of industrialists, to construct an artifice of principles of location by which existing reality might be interpreted. Though it lacked immediate applicability to policy questions, it provided what was thought to be a suitable conceptual framework of interpretation. This highly abstract approach forced its own questions, particularly the integration of location theory with the general body of economic doctrine.

In this over-all picture, the role of Walter Isard is especially noteworthy. Having devoted himself to his subject for more than a decade, he attempts in the present work a synthesis of various location doctrines current. According to him, "a comprehensive theory of society or economy should embrace both time and space dimensions" (p. vii). Thus, the problem is pushed to its furthest limits. His purpose is nothing less than "to bring the separate location theories into one general doctrine, to the extent possible, and to fuse the resulting doctrine, where this can be done, with existing production, price, and trade theory" (p. 23). According to Isard, "modern general equilibrium theory is a special case of [the general theory of location and space economy], in which transport costs are taken as zero and all inputs and outputs are viewed as perfectly mobile..." (p. 53). The remainder of the book constitutes an elaboration and perfection of this thesis.

II

Before entering upon a critical examination of the argument, it will be well to examine some of the key concepts that form the scaffolding for this impressive study. Let us begin with a bird's-eye view of the space-economy, one of the most suggestive concepts in location theory.

In the first instance, space-economy may be seen as a visual phenomenon, comprising the actual location of economic activity clusters in all of their physical concreteness: farmstead, business firm, manufacturing plant, urban concentration, region--together with the transport-communication network which links them together into a viable unity. This system of relatively

stable (over the short run) and purposeful interactions, functions by way of a complex pattern of flows of commodities, people, and messages which connect the various locations, land uses, and cities. This system of interaction can be mapped and, in his final chapter, Isard actually presents us with several graphic possibilities of a space-economy. This system has several important characteristics. To begin with, there exists a strong supposition that its structure is hierarchical: "the space-economy tends to comprise a hierarchical set of focal points of different degrees of dominance" (p. 230), where hierarchy may be defined as an arrangement of activities with different radii of action-influence, local, regional, national, and international. There is some evidence, especially as given by the application of the "rank-size" rule that city size somehow corresponds to a given hierarchical order (pp. 55ff.). The space-economy thus presents us with an orderly complex of activities. It is also a dynamic complex, changing in the long-run with technological and other types of innovations and, we might add, accompanying the process of economic growth (see, e.g., this reviewer's paper on "Location Aspects of Economic Development", *Land Economics*, August 1956).

What accounts for this apparent order? Is it not, in the final analysis, the result of a myriad of individual location decisions, accumulating over decades and even centuries? Three groups of influences play upon these decision (pp. 138-139):

1. Transport and certain transfer costs
2. Costs associated with labor, power, water, taxes, insurance, interest, climate, topography, social and political milieu, etc.
3. Agglomeration and deglomeration economies, including: (a) economies of scale, (b) localization economies, and (c) urbanization economies.

Of these several possible influences, only transport and transfer costs vary regularly with distance from any given point of reference. Hence, distance comes to be considered as the major variable for study in the present context. It is this variable that alone may be said to account for the observed order in the space-economy.

Underlying the spatial ordering of activities, is the assumed rational behavior of capitalists (or, more generally, if also more awkwardly, economic decision-makers) who proceed from the simple motivation of maximizing their net-returns from an investment. Distance enters significantly as an element affecting their location decisions. To come to grips with this problem, Isard suggests the concept of transport-inputs (he had referred to these in earlier writings as "distance-inputs") and the related concept of the transport-rate. The first is defined as "the movement of a unit of weight over a unit of distance" (p. 79), such as pound-miles, or ton-kilometers. The transport rate, on the other hand, is the price of a transport-input, and is established by a simple demand and supply interaction. Transport-inputs are compared by Isard, in a somewhat elliptical fashion, to capital-inputs, and a claim is made--though this is not essential to the argument--for considering them as one of the basic factors of production, together with land, labor, capital, and managerial ability (pp. 89-90).

Proceeding with his analysis, Isard comes to formulate his basic principle of a general theory of location, a principle that also purports to integrate

location with the general theory of equilibrium: "the marginal rate of substitution between any two transport inputs or groups of transport inputs... must equal the reciprocal of the ratio of their transport rates, social surplus (however defined) less transport costs on all other transport inputs being held constant" (p. 252). We thus arrive at the heart of his argument, which is that transport-inputs form a part of the transformation function, and that in arriving at an optimum location, the decision-maker is confronted with an almost unlimited range of substitution possibilities among different forms of transport-inputs as well as between transport and all other inputs as a whole.

III

His argument, however inadequately, having been stated, we can now proceed to a critical review of Isard's principal thesis and to attempt to state some implications for the analysis of the process of economic growth. Perhaps it may not be altogether fair to concentrate attention on so fundamental an issue as method of analysis when the author himself is so painstakingly aware of the issues involved. But both the strengths and weaknesses of Isard's book are largely due to the methodology adopted and the problem is in itself so significant for future study of spatial structure that it merits extended consideration.

Briefly, Isard's method may be characterized as being non-historical and based on the analysis of a single variable (distance) and of equilibrium conditions. In this respect, the method is typical of that adopted in most theoretical economic analyses. It has the evident advantage of clarity, precision, elegance, and neatness: solutions tend to be formulated mathematically. Further, it admits a theoretical artifice to be built that rests on but a few simple a priori assumptions and can be summarized in but a small number of basic principles or rules. Its beauty is that of simplicity. But, and this is the critical question to be asked, does it also help us successfully to interpret and understand reality, where by "understanding" I mean that "knowledge from within" that the Germans translate as verstehen? The methodological issue is an old and hoary one, but its ghost has not been laid. Let us examine it as it relates to the study before us.

Right at the outset, though recognizing its intrinsic legitimacy, Isard rejects the historical approach adopted by such varied writers as Roscher, Weber, Usher, and others (p. 15). He does so consciously and assumes the penalty of working within a framework that is, in his own words, "non-operational" (p. 23). The remaining features of his method, single factor and equilibrium analysis, are already implicit in this abandonment of historicism.

Isard's analysis thus does not grow from an empirical study of different locational patterns in varied places all over the world, their evolution, their present historical stage of development as influenced by technology, the geographic and cultural conditions of location, the nature of location decisions, and other historically-determined phenomena. Rather, an order in spatial arrangement is assumed or, at best, suggested (what this order is, is not entirely made clear, except as reference is made to the rank-size rule and to certain systematic variations of phenomena with distance); the "friction" of distance is made to account for this assumed order; a further assumption is made about "rational" location behavior; and from this a general location

principle is derived. All disturbing complexities are meanwhile held fast under a rigorously applied *ceteris paribus* formula, and the analysis proceeds, unhampered by the disturbing complexity of historical reality.

Now we know, from even superficial observation, that the spatial structure (*Raumordnung*) of economic activities varies not only with economic growth, but that it may vary from place to place as well. It would be a reasonably good assumption, for example, that the regularities in the structure observed in the United States in 1957 are correlative with a particular space-time coordinate, and that the patterns 10, 20, or 30 years hence will be quite different from today, just as the geographic distribution of activities in Brazil, France, Russia, or Japan will differ each among themselves. Or suppose that we begin with an analysis of the location of cities. Might it then not be argued, in an historical context, that cities came first (for whatever reason--defense, topography, supply of food, etc.) and that economic structure and spatial relations were forced into conformance with this initial pattern instead of having determined it? In some countries, this hypothesis may indeed seem more valid than one which makes transport-inputs the key variable in the location process. It may be true even for the United States, where there is a strong supposition that industrial locations are largely indifferent as to site within the broad industrial market areas in the northeastern region (see Chauncy Harris, "The Market as a Factor in the Localization of Industry in the United States", *Annals of the Association of American Geographers*, December 1954). Or, to consider still a third possibility, is Isard's theory adequate to explain the emergence of linear cities, conurbations, urban belt regions which are becoming the typical structures in many parts of the United States today? With this new urban morphology, the rank-size rule disappears as even an empirical uniformity, inasmuch as the rule depends on an antiquated definition or conception of the city. Thus, the very assumption of a more or less stable order would be threatened.

The search for a *general* theory of location may on closer examination turn out to be premature if, indeed, not altogether inappropriate. What we do need now is theories of the "middle-range" endeavoring to explain, at a lower level of abstraction, the multi-faceted reality that surrounds us. This is in no way to deny the importance of such a concept as transport-inputs for location analysis. But an explanation of what exists, has existed, and will exist on the basis of this concept alone (even within the broad framework of substitution analysis) would seem to be inadequate.

In large measure, Isard's determinate solutions are the result of his concentration on the influence of the single "factor" of distance. The method he pursues is the familiar one of "relaxing" assumptions, thus gradually approaching a realistic picture of the economy. But let us see what this amounts to. Imagine that we are investigating a complex phenomenon which subject to 100 variables interacting with each other. Of these, we hold constant 99 and study the influence of the remaining one. We then "relax" two or three variables... But have we really succeeded in clarifying the picture? Have we said something essentially significant about it? After our final approximation, we are still faced with the bumbling confusion of 96 interacting variables that only temporarily had been held in check by the artificial fetters of "other-things-being-equal." Is it any wonder then that economic theories of this sort are of little use to policy makers and planners, that such men must, in the final analysis, resort to traditional rules of thumb, intuition, and practical

experience? An economist-advisor is faced with the same problem: his ceteris paribus theories will have for him barely a heuristic value and he will have to resort to other forms of understanding. Perhaps, for all its obscurity and difficulty, he will discover a more fruitful approach in Weigmann's formulation of the space-economy as a "Rhythmic-moving Gestalt whole with the core composed of the markets for land, labor, and capital goods and of numerous other markets superimposed upon these, overlapping and irregularly intersecting each other and at times extending into other space-economies" (p. 41).

Finally, we come to the question of the validity of equilibrium analysis. Here, Isard is very explicit. After recognizing that "in a full historic sense, actual economic life never does realize a state of equilibrium" (p. ix), he nevertheless goes on to say that "equilibrium analysis is valuable because it enables one to grasp better the laws of change and workings of a system" (p. x). But surely this would only be true if there were a tendency to equilibrium in change, if one could speak of historical change as merely a "process of adjustment". Isard himself cites Abbot P. Usher with evidence to the contrary. His choice, in spite of the evidence, is explicit, but the issue remains unresolved.

Isard bases his choice of method on its supposed heuristic value. But one is left to wonder if there is not also some other, unstated reason that leads him to adopt a non-historical scheme of analysis. "The question of actual location must be distinguished from that of rational location... It would be dangerous to conclude that what is must also be rational... No! The real duty of the economist is not to explain our sorry reality, but to improve it. The question of the best location is far more dignified than determination of the actual one." Thus August Lösch in The Economics of Location (New Haven, 1954, p. 4).

But what is a "correct" location and what, in this context, can be thought of as "rational"? One might agree with Lösch's statement of purpose ("to improve reality"), but it would be extremely dangerous, as, alas, it happens not infrequently, to identify the economists' non-historical, single-value constructs with "correctness" and "rationality". No single principle will satisfy the condition of rationality. Rationality must come to terms with all of reality or it is nothing. This is essentially the problem of the decision-maker who must often compromise a large number of conflicting interests. It is also the problem that politicians, administrators, and economists face when attempting to evolve policies promoting economic growth.

It is interesting to observe that no recent major work dealing with the theory of economic development so much as touches upon the locational and, by implication, the regional aspects of economic change. Nor does Isard's treatment of location permit an elaboration of this extremely important connection, though it is implicit in much of his analysis.

Decisions in the field of development policy must be based, among other things, on an understanding of regional differences in production and welfare; an analysis of the regional implications of national policies, such as for tariff and credit, an estimate of the regional multiplier of investment, and related issues. These are not incidental questions, but belong to the very core of analysis as soon as we accept the view of a space-economy in all of its ramifications.

It would hardly be exaggeration to argue that to a large extent a dynamic location theory and a theory of economic development are one and the same. The central problem in economic growth is the mobilization of capital and its fixation in determinate locations. Different places will, up to a point, be actively in competition with each other for the same sources of capital, and the "attractiveness" of any one place will depend on the "advantages" offered by the environment for the particular activity in which investment is to be made. The basic problem for the developer is therefore to improve the locational environment (of one region relative to other regions, of the nation relative to other nations) so that capital will be forthcoming in quantities sufficient to raise real income per person. Different incentives will have to be provided for different types of entrepreneurs--innovators and imitators, experienced and inexperienced, national and foreign, large-scale and small-scale, and so forth. For each of these, the minimum conditions for motivating a capital risk in a particular locality will differ, and policy must be oriented to these particular needs. Here is not the place to elaborate upon this theme. Be it enough to say that it is to the credit of Isard for having suggested the unit of economic phenomena, including the unity of economic growth and location processes, a unity given in existence to which a theoretical unity should correspond.

Administrators and men of practical affairs will find the sketch for the space-economy, as presented by Isard, perhaps more suggestive than the theoretical derivation of location principles. At the same time, Isard has given economic theory a much-needed re-orientation. Though the territory which he has chosen for his work is of vast dimension and will require for its conquest nothing less than an integrated theory of social behavior, he has succeeded in neatly delimiting his field for the analysis at hand. The result, the linking of location theory with general equilibrium and trade theory, represents a substantial achievement within the traditional framework of economic analysis. This framework, in the opinion of the present reviewer, is incapable of "explaining" reality. Isard largely concurs in this view, if I read him correctly, but maintains the heuristic usefulness of his method. In any case, he has promised us a companion volume to treat what he calls "the principles of regional science and general regional theory" (p. x). May it be hoped that in this future volume he will attempt to bring observed reality and theory into closer coincidence with each other.

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* The views expressed in this article in no way may be said to reflect the opinions of the U. S. Operations Mission to Brazil of the International Cooperation Administration, to which the reviewer is attached as advisor in regional planning.

R. RICHARD WOHL

R. Richard Wohl, who died on November 15, 1957, at the age of thirty-six, was on the threshold of an outstanding career. In addition to his teaching duties at the University of Chicago and active pursuit of his own research, he had been directing a group project on the history of Kansas City. Several young people had completed monographs on aspects of Kansas City growth, and Professor Wohl was about to write the final comprehensive volume. Combining, as it inevitably would have, his knowledge of all of the social sciences, this promised to be a new kind of urban history. Meanwhile, he had finished a manuscript on the success theme in the novels of the late nineteenth century writer Horatio Alger. It is to be hoped that some publisher will make this latter work available. These studies, in addition to his doctoral dissertation on Henry Noble Day, a part of which appeared in Men in Business (edited by William Miller) and papers and articles on diverse subjects too numerous to mention, suggest the breadth of Professor Wohl's interests.

Majoring in history as an undergraduate at New York University, in economic history in the graduate school at Yale, and in human relations for his doctorate at Harvard, he emerged as the kind of general scholar seldom found in this age of specialization. As an assistant and associate professor of social science at the University of Chicago, he excited students by his eloquence and wide-ranging thought. During his studies at Harvard he associated himself with the Research Center in Entrepreneurial History, and joined Arthur H. Cole and Hugh J. G. Aitken in founding and editing Explorations in Entrepreneurial History. After going to Chicago in 1951, he edited Economic Development and Cultural Change.

As one who knew Dick Wohl from his days as an undergraduate with a most unusual devotion to historical research, I have lost a valued friend, and I believe that history and the other social sciences have lost a scholar of great promise.

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